Medication Use and Elderly People

PROCEEDINGS OF
THE BRITISH COLUMBIA
INVITATIONAL WORKSHOP ▪
VANCOUVER ▪
FEBRUARY 1989 ▪

SENIORS DRUG
ACTION PROGRAM

Province of
British Columbia
Ministry of Health

MEDICATION USE AND
ELDERLY PEOPLE

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89-05849/

Canadian Cataloguing in Publication Data

Main entry under title:
Medication use and elderly people

Prepared by Stevenson Kellogg Ernst & Whinney. Cf. Verso of t.p.
Held at University Hospital, University of British Columbia on Feb. 16th and 17th, 1989.
ISBN 0-7718-8793-0

1. Aged - British Columbia - Drug use. 2. Geriatric pharmacology - British Columbia. I. Stevenson Kellogg Ernst & Whinney. II. British Columbia. Seniors Drug Action Program.

RC953.7M42 1989 615.5'47'09711 C89-092157-1

This volume contains the proceedings of a Workshop held at the Psychiatry Unit, University Hospital -- U.B.C. Site, Vancouver, B.C., on February 16 and 17, 1989.

Funding was provided to the Seniors Drug Action Program, Ministry of Health through the Community Action Program, Ministry of Labour and Consumer Services, Province of British Columbia.

Workshop proceedings were recorded and prepared by Stevenson Kellogg Ernst & Whinney, Management Consultants, Vancouver, B.C.

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I

INTRODUCTION

These proceedings are intended to take the reader through the experience of a delegate attending the two-day British Columbia Invitational Workshop on Medication Use and Elderly People. This section introduces the Seniors Drug Action Program (SDAP), through which the workshop became possible, and describes the pivotal role the workshop played in shaping program proposals for the rational use of medication among British Columbia's seniors.

The Ministry of Health was authorized to implement the SDAP in October 1988 as part of a broader initiative to address drug and alcohol problems within the province. Funds have been allocated from the Ministry of Labour and Consumer Services providing a total budget of $790,000 over three years. The SDAP has three objectives: (1) education of consumers (elderly people and their caregivers), (2) education of health care professionals, and (3) evaluation of the educational endeavours. A major strategy in meeting these objectives will be consultation and collaboration with the organizations and agencies responsible for seniors' health.

The British Columbia Invitational Workshop was identified as an essential first step toward meeting the SDAP objectives. A Workshop Planning Committee with representation from the professional associations of medicine, pharmacy and nursing, seniors advocacy groups, community and residential services, and government was formed late in 1988 to plan the workshop. The goal of the workshop was to make decisions on medication awareness and education programs suitable for implementation in British Columbia.

Over 50 organizations, including key Ministries and Divisions of the provincial government, were invited to send delegates to the workshop who were both knowledgeable in the issues surrounding medication use and the elderly and in a position to represent their organizations' interest and involvement. A list of delegates is provided in Appendix C.

The two-day meeting was defined as a "workshop" in the strictest terms. Delegates were expected to review, prior to the workshop, two important documents provided by the Planning Committee:

1. Priorities and Approaches for Improving Prescription Medication by Older Americans. National Council on Patient Information and Education, 1987.

2. Drug Utilization by the Elderly. Dr. Ronald Bayne, Gerontology Research Council, 1988.

Delegates were also asked to come prepared to discuss the issue in practical terms and this required consultation with members of their associations regarding a preliminary commitment to participate in the implementation of selected programs.

To facilitate decision-making on programs for British Columbia and to avoid "reinventing the wheel," SDAP staff and consultants collected information on medication use improvement programs from other jurisdictions through an informal telephone survey throughout Canada and the United States and a literature review. This material was reviewed, compiled and presented in a seven-point format -- title, sponsor, summary, target, medium, required resources, evaluation -- for each of 40 separate program ideas. These programs were then exhibited in an extensive poster display forming an essential part of the workshop content (see Program Posters, Appendix A).

Through consultation with other jurisdictions, a small number of key names of persons identified as experts in the area consistently came up. We were fortunate in being able to bring six such individuals to Vancouver as our keynote speakers. From Canada, we heard from Dr. Ronald Bayne, Dr. Ruby Grymonpre and Dr. Michael Gordon, and we learned of innovative programs in the United States from Dr. Peter Lamy, Mr. Robert Bachman, and Ms. Madeline Feinberg. In addition, we heard of provincial developments in the field of long-term care nursing from Mr. Morrie Steele of the Registered Nurses Association of B.C. (RNABC).

The program content of the workshop reflected the two major strategies for promoting rational drug use, consumer education and professional education, devoting one day to each. On each day, the objective was clearly defined -- to achieve a consensus on which programs should be implemented in British Columbia. The "work" for the first day was: a) to view all of the posters displaying the various consumer programs, b) to listen to the keynote addresses on issues, c) to vote individually by placing one of five coloured stickers on the program(s) the delegate was most enthusiastic about, and d) to participate in small inter-disciplinary discussion groups to develop selected program ideas in the British Columbia context. In the small groups, delegates were also encouraged to explore program ideas introduced by the keynote speakers and ideas of their own. This procedure was followed again in the second day for professional programs. Finally, at the end of each day, recommendations from the small groups were made to the Plenary.

Despite a very ambitious agenda, our clear statement of objectives at the outset, the "work"shop forum, and the dedication of delegates all contributed to a very successful two days. In both areas, consumer and professional education, priorities emerged providing a direction for Seniors Drug Action Program initiatives. While these priorities now require refinement regarding program leadership, resource requirements and detailed work plans, the SDAP can embark on these programs with the endorsement of concerned professional and consumer groups.

These proceedings have two target audiences -- those who were delegates at the workshop and persons in British Columbia and other jurisdictions interested in the issue of medication use and the elderly. For British Columbia delegates, these proceedings will become a reference for developing activities during the life of the Seniors Drug Action Program and beyond. For others, the value of the proceedings will be mainly the speakers' presentations and the descriptions of the 40 exhibits of consumer and professional programs collected from various jurisdictions in North America, many of which helped stimulate ideas and action for addressing the problem in British Columbia.

II

CHAIRMAN'S REMARKS -- DR. DAVID BLAIR

Workshop Chairman, Dr. David Blair, opened proceedings with an overview of the workshop's intent. He explained that workshop participants had been brought together to seek new directions and new ideas for the rational use of medications by the elderly.

As President of the British Columbia Medical Association, Dr. Blair noted that the issue of medication use by the elderly was a concern to numerous committees of the Association. As a family practitioner with a background in pharmacy, medication use by elderly patients was of special concern to him. Workshop participants would be asked to consider problems and seek objective solutions to this important issue.

Dr. Blair noted the increasing prominence of medications used to (1) prolong the useful, productive life of individuals, (2) reduce both the incidence and impact of non-life threatening disease, and (3) reduce patients' dependence on caregivers and high cost health care services. However, he noted that numerous problems with medication use can also be identified. These can manifest themselves in such undesirable outcomes as needless deterioration in health, unnecessary institutionalization, unnecessary costs, and the gradual diminution of health care providers' "caring" approach as they become increasingly reliant on medications to solve their patients' health care concerns.

Dr. Blair explained that problems with medication use could originate in part with the patient, in part with the caregiver and in part with society which has developed an unrealistic reliance on drugs. If the problems associated with medication use are to be minimized or eliminated, the objective of rational medication use must be pursued within a clear vision or goal.

Bringing together participants with a range of interests would contribute to the development of the multi-faceted approach required. Workshop participants would be asked to share their insights, to suggest ways in which existing approaches or programs could be enhanced and improved and to assist in the development of new initiatives leading to more rational use of medications by the elderly.

III

WORKSHOP OBJECTIVES -- DR. DUNCAN ROBERTSON

Dr. Duncan Robertson, Medical Consultant to the Seniors Drug Action Program, described his task as one of articulating for workshop participants (1) why we're here, (2) where we're going, and (3) how we'll get there.

1. Why we're here

Dr. Robertson drew participants' attention to their pre-reading materials for a clear statement of the invitational workshop's intent. Briefly, workshop planners had attempted to bring together a broad range of individuals and groups who had a stake in the issue of rational medication use by the elderly. Resolution of problems was to be sought through collaborative efforts undertaken with the support of seniors, professionals, educators, relevant industries and government. As Workshop Coordinator, Dr. John Gray had explained, participants were here "to work" and"to shop." They would have the opportunity to share their ideas and insights with others, to consider a variety of program possibilities, and to work towards developing a "product" for implementation in British Columbia.

2. Where we're going

During the course of the two-day session, workshop participants will have identified a series of programs that can be developed and implemented in British Columbia. They will (1) have reviewed program ideas presented in poster format, (2) have added to these based on information provided by keynote speakers and through small group discussion, (3) have identified an implementation plan for the most desirable of these, and (4) have formed working groups that may carry the identified program initiatives forward.

By the end of the first day, participants will have examined medication use from a consumer perspective and have developed ideas for educational programs directed to elderly consumers.

3. How we'll get there

Dr. Robertson noted that the objectives for the day and for the workshop as a whole were ambitious. In order to achieve the envisioned endpoint, it would be necessary to adhere to the time frame as closely as possible. Care would have to be taken to avoid "re-hashing" of issues and to ensure progress. Participants would be asked to consider issues and problems and would be presented with a number of approaches to addressing or resolving these. However, they would be asked to develop only those program ideas which (1) were of greatest relevance to the British Columbia context and (2) offered the greatest potential for successful implementation. As Dr. Robertson explained, focusing work in this way would improve the chances of workshop goals being fully realized.

IV

PROGRAM

The program for **British Columbia Invitational Workshop on Medication Use and Elderly People** is shown below.

British Columbia Invitational Workshop on Medication Use and Elderly People

Thursday, February 16, 1989: Overview and Consumer Issues

8:00	9:00 A.M.	Registration, view displays and continental breakfast
9:00	9:05	Welcome and opening remarks
9:05	9:15	Chairman's address -- Dr. David Blair
9:15	9:20	Background on Seniors Drug Action Program and Development of Workshop -- Dr. John Gray
9:20	9:35	Workshop objectives and agenda -- Dr. Duncan Robertson
9:35	10:10	Medication use and the elderly: problems and challenges -- Dr. Ronald Bayne
10:10	10:40	Nutrition break, view displays
10:40	11:45	The B.C. situation 1. Data base: Mr. Derek Daws and Mr. Doug Danforth 2. Perspective in B.C. -- Panel: Ms. Kay Stovald, Ms. Gloria Parker, Mr. Ron Walker, Dr. Neil Yorkston, Ms. Sylvia Thompson, Ms. Gloria Lifton and Dr. David Blair
11:45	12:00	Discussion
12:00	12:10	Summary -- Dr. Ronald Bayne
12:10	1:00	Lunch (on site), view displays
1:00	1:30 P.M.	Problems for elderly consumers -- Dr. Peter Lamy
1:30	2:00	Strategies for elderly consumers -- Ms. Madeline Feinberg
2:00	2:15	Commentary -- Dr. Ruby Grymonpre
2:15	2:30	Discussion
2:30	4:00	Small groups: What programs targeted to consumers can we develop and implement in B.C.? (with coffee)
4:00	5:00	Plenary session -- Dr. John Gray
5:00	6:00	Complementary reception

British Columbia Invitational Workshop on Medication Use and Elderly People (continued)

Friday, February 17, 1989: Professional Issues

8:30	-	9:30 A.M.	Coffee and muffins
9:00	-	9:05	Chairman's remarks -- Dr. David Blair
9:05	-	9:10	The focus for today -- Dr. Duncan Robertson
			"Rational Drug Use: Shared Responsibility"
9:10	-	9:35	Physicians -- Dr. Michael Gordon
9:35	-	9:45	Discussion
9:45	-	10:10	Pharmacists -- Dr. Ruby Grymonpre
10:10	-	10:20	Discussion
10:20	-	10:50	Nutrition Break, view displays
10:50	-	11:15	Nurses -- Mr. Morrie Steele
11:15	-	11:25	Discussion
11:25	-	11:50	Implementation and delivery of programs -- Mr. Robert Bachman
11:50	-	12:00	Discussion
12:00	-	1:00 P.M.	Lunch (on site), view displays
1:00	-	2:00	Small groups: What programs targeted to professionals can we develop and implement in B.C.?
2:00	-	3:00	Plenary session -- Dr. John Gray
3:00	-	3:10	Formal workshop close -- Dr. David Blair
3:15	-	3:45	Working/interest groups (optional)

Biographies of Keynote Speakers are found in Appendix B.

The workshop was held on February 16 and 17, 1989 at the Psychiatry Unit Lecture Theatre, University Hospital, Vancouver, B.C.

The **British Columbia Invitational Workshop on Medicine Use and Elderly People** was funded by the Province of British Columbia.

V

OVERVIEW

A. MEDICATION USE AND THE ELDERLY: PROBLEMS AND CHALLENGES -- Dr. Ronald Bayne

There has been a good deal of reporting recently, in both the professional and public media, of the excessive utilization of medication by the elderly, and of the escalating costs of the provincial drug benefit programs.

However, rather than cast medication use unconditionally as "the enemy," our concern should focus on specific elderly persons who are being given ineffectual or inappropriate medications, or who are unable to take them as directed. We must also be concerned about those elderly persons who develop complications, adverse reactions or untoward events from medications that have been appropriately prescribed and in appropriate dosage. Elderly persons are more vulnerable to such events and are more seriously affected by them.

The concept of excessive utilization should be defined as the inappropriate provision or use of medications, or the use of medication where some other approach would be better. We must not reduce the availability of useful medications, but should help seniors understand and use medications correctly and appropriately. We must encourage and assist physicians, pharmacists and nurses to provide and monitor medications wisely. Cost control should be sought, not by reducing access through user fees and other means, but by reducing wastage of inappropriate medications and by increased efficiency in provision.

The task of this workshop conference is to consider and recommend ways in which consumers can learn better use of medications and ways for health professionals to assist them through appropriate prescribing, dispensing and monitoring practices.

Clearly no single group of professionals or consumers can resolve the problems, but by working together we can identify the components of problems and the action each of us should take cooperatively.

Ronald Bayne, M.D. is Chairman of the Gerontology Research Council of Ontario and Chairman of the Action Committee of the Coalition of National Organizations with Interest in Medication Use and Elderly Persons.

In 1987 the Gerontology Research Group of Ontario brought together health care professionals from a number of disciplines and from across the country to discuss the issue of medication utilization in the elderly population. Their objective was to identify the major problems faced by elderly consumers and by the providers of care, and to develop recommendations aimed at reducing inappropriate medication use.

Participants met in small multi-disciplinary groups, alternating with plenary reporting sessions, to review problems, to decide what could and should be done and to recommend actions that could improve the situation.

A number of interconnected problems related to seniors themselves, professional groups, governments and research needs were identified.

1. Problems affecting seniors

The ready availability of efficacious high-quality medications for the elderly through provincial drug benefit programs is recognized as valuable. However, concern has been repeatedly expressed about untoward events occurring in the elderly because of excessive or inappropriate use. Adverse reactions to medications and "untoward events" have been frequently reported to cause toxicity, illness and even hospitalization and death. Such untoward events may be due to failure of expected response, to excessive dosage or increased sensitivity or to failure to metabolize and excrete the medication. The person may be taking too many medications and interaction between medications can reduce or enhance their effects. Persuasive advertising can encourage the use of many non-prescription products and sometimes neither the patient and family nor the health professionals may be aware of the ingredients and of any potential for harm. Some elderly persons become dependent on professionals and come to rely on medications. It may take longer to convince someone that medication is **not** required than that it is. The patient may not tell the physician or pharmacist about all the medication being taken, especially as over-the-counter remedies may not be thought of as medications. In addition, the patient may receive medication from several doctors or pharmacies with no central record of what is prescribed or taken. Seniors frequently find present methods of packaging difficult. Child-resistant containers may be impossible to open, or require the lining up of two almost invisible arrows. The instructions for use may be sparse, or in medical terminology that is meaningless for the average consumer.

The product of one manufacturer may be substituted for that of another by the pharmacist, but sometimes, although the drug is the same, non-medicinal ingredients may be included for colour or format and these are usually not listed. The effect on the patient may be altered, or the patient may believe the medication has been changed or a mistake made by the dispenser. Provincial programs differ in their policies governing access to their program and the medication provided. Such differences frustrate and confuse seniors visiting or moving from one province to another.

Communication for elderly patients may be difficult, especially if the health professional is not fluent in their language. Some seniors may have greater difficulty in communication due to diffidence, a sense of insecurity, hearing or vision impairments, or problems in self-expression. During the lifetime of today's seniors, physicians were regarded as omnipotent authorities achieving wonders with new technologies and new medications that were literally life-saving. Some seniors feel that doctors fail to listen to them, adopt a paternalistic attitude or appear condescending. Faced with the reality of a busy doctor's office schedule, older patients may not formulate questions well, do not have a prepared list of questions and may fail to hear or understand the doctor's advice and instructions. Some seniors may obtain information from persuasive advertising and have little opportunity to gain a balanced view. In consequence, they may request and take too many medications, experiment with them, or fail to take them as prescribed.

2. Problems affecting professionals

Problems are not limited to consumers. Many health professionals, including physicians, pharmacists, nurses and other professionals, lack knowledge on the effects of aging on drug metabolism, or of medications on the aging person. They lack knowledge on the effects of medications on other conditions the patient may have, the best ways of prescribing and of monitoring outcomes and the best format for packaging and instruction to facilitate proper use.

The physician may not allocate sufficient time for counselling and seems often to have a negative attitude towards aging and the elderly. The reimbursement schedules do not reflect the extra time frequently required for the elderly patient. Pharmacists have been trained until recently only to be aware of the specific actions of medications and lack knowledge about the effects of aging. Although many pharmacists maintain patient profiles, not all pharmacists have adequate counselling skills and may lack the time and space to provide such services.

Communication between professionals is often somewhat limited. Professional education tends to be compartmentalized, thereby reducing the opportunity for experience in multi-disciplinary team work and communication. Inter-professional jealousy and lack of respect between professionals may impair effective sharing of responsibility. For example, the information on medications prescribed in an institutional setting may not reach the family physician unless the patient mentions it.

Physicians frequently do not inform the pharmacist on the purpose of the prescribed medication or the patient's health problem. The community nurse often experiences difficulty in learning what medication(s) have been prescribed and in sharing his/her concerns about possible adverse effects. Although there are real concerns about preserving confidentiality in such information exchange, ways should be found to convey the essentials for proper dispensing and monitoring of the prescribed treatment.

3. Problems in identifying untoward events

Medication-related untoward events may emerge only with use in large numbers of patients after release on the market. Identification of such events depends on a follow-up system to detect and report them and to analyze reports and feed back the information. Some provincial drug benefit programs have the ability for such follow-up, but none are used to full potential. The present voluntary Drug Adverse Reaction Reporting System of Health and Welfare Canada receives reports on only a small proportion of the untoward events that occur. There are significant costs in maintaining an effective system of post-marketing surveillance, but the potential for saving, in reducing adverse reactions and sickness and medication wastage, is very great.

4. Problems related to research

For health professionals to be better informed, there is need for more reliable and accurate information. At present, pharmaceutical manufacturers are not specifically required to carry out clinical trials with elderly persons to establish correct dosage and detect possible untoward effects before a product is approved for marketing. Clinical trials are required, but usually involve only young or middle-aged patients. If older persons are included, they are not identified by age. The needed research involving older persons specifically, is difficult to do for financial, ethical, legal and logistical reasons. That is, it is difficult to find persons to participate in medication trials who need the medication, but are otherwise well enough, understand the purpose of the research and can give their consent and who can continue in the trial long enough without developing another condition. It is difficult to recruit such persons in sufficient numbers so the trial can be completed efficiently in a reasonably short time. It was also stated that the Canadian system for approval of new medication may unduly delay release of new and useful products. Although such delay may result in identification of adverse effects of the medication in other countries prior to release here, it is not acceptable for Canada to expect other countries to try out the new medications.

5. Recommendations affecting seniors

Recognizing that **seniors** need better information about correct and appropriate use of medications, it was recommended that governments, non-governmental organizations and the media should be involved in assembling and distributing reliable information. Educational materials should be developed in association with seniors and seniors groups should be involved in their use. Pharmacies should provide space, educational literature, tapes and counselling.

It was recognized that medication should not be seen as the best way to relieve symptoms or preserve health, but rather that seniors should be encouraged in exercise and good nutrition. Accumulated medications could be brought to a pharmacy for review and advice given to seniors on out-dated medications, excessive use or possible medication interaction.

It was thought that in promoting non-prescription medications, more attention should be given by the manufacturers to warning about side effects and possible interaction with other medications.

6. Recommendations affecting professional groups

Another group of recommendations are directed mainly to **professional groups**. It was recognized that health science faculties increasingly are developing some programs in geriatrics and gerontology. These need to be increased and also continuing education in geriatrics is especially needed for professionals now in practice. Schools of pharmacy should also ensure that pharmacists have sufficient knowledge about medication and the aging population. Education should promote a positive approach to aging patients and include specific information about medications and the elderly, the identification of persons at high risk and of problem medications. All health professionals should be taught how to counsel older persons on medication use. They should also learn methods for inter-professional cooperation and communication in community practice.

The information now available should be improved and made more accessible to practitioners. The representatives of pharmaceutical manufacturers who visit doctors' offices could participate in providing such information.

It was recommended also that methods should be improved for keeping records of prescribing, follow-up and monitoring of medications from physician's office, especially for individuals and groups at high risk for untoward events. Better methods are needed for transmitting information between professionals, that is, the physician, pharmacist and community nurse. Information about the medication prescribed, the patient's health status and potential or actual problems, should be shared with proper safeguards for confidentiality. Effective counselling should be recognized and encouraged by appropriate remuneration.

As for **pharmacists**, it was recommended that they should maintain patient medication profiles for elderly clients, especially those identified as at high risk due to various factors.

This increased involvement of the pharmacists in the education, counselling and clinical monitoring of elderly clients will clearly put increased demands on their time and space. Therefore, it was recommended that a survey should be done of community pharmacies in Canada to see what they now offer and to ask how they could provide this service.

Packaging of medications, especially in child-resistant containers, is notorious for creating problems for seniors with handicaps in vision, dexterity or strength. Senior friendly packaging should be developed to alleviate this. In addition, special systems for persons tending to forget or confuse medications should be expanded. For such persons, packaging could include an electronic device to signal when to take the medication and to record when it was taken.

7. Recommendations affecting governments

Several recommendations concern the **provincial drug benefit programs**. Physicians have reported problems resulting from substitution by the pharmacist of one brand of medication for another less expensive one listed as interchangeable. It is said these medications, which should contain the same medication and the same other inactive ingredients in the same amounts, are in fact, not clinically equivalent. This is a patient stabilized on a medication may lose this stability and the physician would not have been warned. Moreover, the patient may be confused because the refilled prescription has a different appearance. Therefore, it was recommended that such substitution should not occur without the physician's prior knowledge.

There are variations between provinces on what medications are covered by the drug benefit programs, but little information is available. It was recommended that the provincial drug benefit programs should harmonize the designation of interchangeability and list what is provided.

The provincial drug benefit programs could be a means of post-marketing surveillance to detect inappropriate provision of medications and untoward reactions. Although programs have taken an initiative i n this direction, it was recommended that this be expanded, at least for specific medications problematic for the elderly. A drug utilization review board could analyze results and recommend appropriate action that would not only avoid future ill effects, but also control wastage and costs. These programs could also provide a centralized resource when information is needed urgently by professionals or consumers.

The attention of **Health and Welfare Canada** was drawn to the fact that some medications are marketed under the same or similar name, although the contents are different. The Health Protection Branch should prevent this from occurring.

It was noted that Health and Welfare had conducted a review of the system of evaluation of medications and they were urged to make the results public.

These recommendations were based on the information currently available and on the perceptions of the conference participants from their experience. It was realized that more reliable information is needed and that well-conducted trials may be needed before full implementation of some of the recommendations is possible. However, it was recommended that action toward implementation should start immediately, with new information added as it becomes available.

8. Recommendations affecting research

The following need for more **research** was identified:

Research should be carried out, in association with the regulatory authority and the provincial drug benefit programs, to determine the extent of provision of medications to the elderly and the prevalence of untoward events and inappropriate use. To deal with "over medication" of the elderly, one needs precise information on which elderly, what medications and how they are prescribed. Studies of various systems of post-marketing surveillance should be evaluated to determine the most cost-effective method. Research is needed on the optimal dosage level of medications for elderly persons, especially for those medications that more commonly cause problems for those elderly persons who are at greater risk of untoward events. But persons over age 65 are seldom included in research drug trials because of the complexity of doing so. Therefore, pharmaceutical manufacturers should be encouraged to include seniors in clinical trials of medications and to test the feasibility of routinely including seniors in clinical trials. If this proves feasible, the Health Protection Branch of Health and Welfare Canada should include as a requirement, mandatory clinical trials with patients in various age groups over 65.

Research is needed for better understanding the extent of over-prescribing of medications and how to correct it, on ways for health professionals to communicate information without losing confidentiality and on ways to help professionals monitor the outcomes of medication use.

Research is needed on how to record prescription and non-prescription medications from all sources for easy review by consumers and professionals. The personal computer chip may be useful and should be evaluated. Basic research is needed to understand the pharmacological effects of medication in the elderly and the effect of aging on medication metabolism. It was recommended that the pharmaceutical industry and the Medical Research Council should fund such research.

Finally, the conference participants expressed their concern that this initiative should not be lost and recommended that GRCO should obtain funding to enable it to work with the many agencies and organizations involved. GRCO should review the results of action taken, identify areas where further research is required and assess the effectiveness of the use of new information on improving the use of medications by elderly persons.

A number of recommendations were developed to address the problems identified. Action based on these recommendations must acknowledge related issues, but have been focused on clearly stated principles, have had measurable objectives, have addressed the specific needs of targeted groups and have involved consumers and providers of health care in concerted efforts. These recommendations and the conclusions drawn from the GRCO conference, may serve as a basis or as a springboard for activity at this conference or work in the province of British Columbia.

Workshop groups and others continuing the work of the conference should consider and clarify the following questions:

- Is the problem for which this program exists clearly described?
- Are the methods and objectives of the program specifically spelled out?
- Is there a target group (e.g. special age group, ethnic group, professional group, etc.) clearly defined?

- Has the program been evaluated in any formal way to show evidence of effectiveness?
- If not evaluated, are the objectives clearly stated so that an evaluation could be done?

B. THE BRITISH COLUMBIA SITUATION

This part of the workshop was aimed at examining some of the issues raised in the overview by Dr. Bayne within the British Columbia context. British Columbia has a Pharmacare system which can provide data on prescriptions to most of the elderly population in the province. This is an important data base not only to assist in identifying prescribing practices which might represent potential problem areas, but to monitor changes in prescribing habits after educational and other remedial efforts. To provide a "human" perspective, a panel representing health care professionals, seniors and elements of the health care system provided unique points of view on problems related to medication use in the elderly.

1. Data base -- a Pharmacare overview

Mr. Derek Daws, Managing Director, B.C. Drug and Poison Information Centre, and Mr. Doug Danforth, Consultant Pharmacist to the Seniors Drug Action Program, provided an overview of the information being generated by Pharmacare on medication use. The British Columbia Pharmacare system is unique in Canada and has a comprehensive data base capable of storing, retrieving and analyzing data on drugs prescribed and covered by the program. The objectives of the development of the Pharmacare data base are to provide prescribing practice information to physicians, pharmacists and to policy makers.

The Pharmacare data base includes the following data elements:

Prescription number
Drug Information number
Pharmacy code
Drug quantity
Date of prescription
Drug name
Drug cost
Dispensing fee
MD number
Invoice number
Patient number

These data base elements are limited to information within the Pharmacare plans: Plan A - persons over 65 living in the community -- serves 316,000 patients with 4.25 million prescriptions costing $91.4 million. Plan B - persons in long term care facilities -- serves 25,555 patients, with one million prescriptions at $13.75 million. Plan C - social assistance and welfare recipients -- serves 136,590 patients, with 1.515 million prescriptions at $31 million.

Central to the Pharmacare data base utilization is its ability to identify trends in drug use in British Columbia. Prescribing incidence (and inferred utilization) and trends can be identified by individual drug, by drug group, by region and, perhaps in the future, by age and gender group of consumers. Out of this data base capability, Pharmacare is able to conduct drug usage reviews. Drug Usage Review is a process which compares existing patterns to pre-determined standards. A professional review committee with representation from medicine, pharmacy, nursing and Pharmacare is used to determine standards.

The drug use review can highlight drug combinations where undesirable interaction effects (such as reduced efficacy or toxicity) may exist. Reports on volume and patterns of utilization can be produced. Reductions in prescribing incidence of certain drugs, notably the heavily prescribed non-steroidal anti-inflammatory drugs, have been observed following the distribution of such reports. Pharmacare data can therefore be reviewed for quantitative and qualitative purposes.

The Pharmacare drug use review information does have some limitations. The information provided maintains confidentiality of identity of physician, pharmacist and patient and, thus, cannot be used to prompt investigation or intervention in specific cases of apparent inappropriate drug use. In addition, it cannot determine whether medications are actually consumed.

2. Perspective in British Columbia: Panel Discussion

A panel representing consumers, nursing, pharmacy, psychiatry, long term care, home support services and family practice presented a cross-section of perspectives on drug utilization by elderly consumers.

a) Consumers

Mrs. Kay Stovald, representing the Seniors Citizens' Counsellors of British Columbia provided a background picture of how the elderly consumer views interactions with physicians and pharmacists. Elderly consumers generally acquiesce to decisions made on their behalf without question. Often elderly consumers are unable to understand, or even hear, instructions provided on medication purpose or medication self-administration. She related a typical experience which illustrated many of the problems faced by elderly consumers of medications: "Arriving at the doctor's office nervous and anxious, the patient only partially hears and partially understands what is being said to her and what is happening. She does not question the doctor's statements or decisions. The patient takes the prescription she is given to the pharmacist, but cannot hear the pharmacist's instructions for administration of the medication. The patient cannot read the small print instructions on the medication package. She cannot physically handle the package and is unable to open it. Feeling ill, she puts the medication aside and later calls back to the doctor, who tells her to stop the medication. The patient decides to keep the medication thinking it may be useful for her at some future occasion. Arrangements are made for a future appointment with the doctor."

Mrs. Stovald challenged workshop participants to identify ways in which isolated elderly consumers could be reached, ways of effectively helping them understand the choices open to them, and helping them to cope with the complexities of physician and pharmacists interactions and with medication usage.

b) Nursing

Ms. Gloria Parker, a Director of Nursing in a long term care facility related some of the key problems faced by health care providers, particularly nurses, in dealing with the elderly. She emphasized the difficulty of determining exactly what medication an elderly patient may be on when he/she first presents at a clinic or other health care facility. In seeking this information, it was possible to come up with several different medications lists depending on the source of information. First, the nurse will check with the patient's doctor and obtain a list of medications. Next, the nurse will ask the patient and prepare his/her own list. The nurse may visit the patient's home and obtain a third list based on what is found there. Finally, the nurse may obtain a different list from the pharmacist identified by the patient.

Although it is difficult to determine exactly what medication an elderly person is taking. Resolution of this question is the prerequisite for effective health care treatment.

Some potential solutions may be found through improving the availability of home support services, -- the better training of home support workers; increasing the numbers of qualified home care nurses and improving nurse's education on drugs and the elderly.

c) Pharmacy

Mr. Ron Waller, a pharmacist and member of the B.C. College of Pharmacists, expressed concern about the co-payment on prescription fees whereby senior citizens pay three-quarters of the professional dispensing fee. The burden of this cost could inhibit or even prohibit medication use by elderly consumers as they may choose to leave prescriptions unfilled. In addition, senior consumers may be denied the benefits of clinical pharmacist consultation and assistance because they shop around to obtain the best prescription price.

Selective purchasing habits resulting from the prescription fee co-payment may be partially responsible for reduction of incomes to pharmacists and indeed, to a contribution to the closure of some drug stores in smaller communities.

Mr. Waller contended that customized and personalized service of a clinical pharmacist are not rewarded and are denied the elderly consumer as a result of the co-payment on prescription fees.

He proposed the following to ensure improved pharmaceutical service to senior consumers included:

- Review of the co-payment on prescription fee.

- Assurance of adequate compensation for pharmacists.
- Incentives for some form of unit dose administration system.
- An improved prescription refill monitoring system.

Mr. Waller described a trial prescription program currently being pilot-tested in selected pharmacies. The trial prescription program is designed to eliminate the waste which occurs when a filled prescription is not fully used. It is based on evidence that up to 50% of prescriptions filled under the Pharmacare program are discontinued. The trial prescription program promotes administration of medication regimen on a time-limited trial basis. Medication effects are monitored over the trial period and assessed before a decision is made to continue the medication.

Mr. Waller emphasized that , due to their training in medication effects and drug reactions and interactions, pharmacists are probably the best able of all health care professionals to communicate appropriate drug information to elderly patients.

d) Psychiatry

Dr. Neil Yorkston, Professor of Psychiatry at U.B.C. reviewed the results of a 1988 study of 100 consecutive geriatric admissions to Riverview Hospital for psychiatric treatment (Ancill, 1988). These individuals, all coming from other institutional settings, had been admitted to hospital under a variety of diagnoses and conditions. Thorough assessment revealed that the underlying problems were dramatically different in many cases from the admitting diagnosis.

The study results highlighted several concerns regarding medication problems for the elderly in residential care facilities. They provided evidence of the prevalence of admission mis-diagnosis, particularly the tendency to over-diagnose dementia and to under-diagnose depression. Incorrect diagnosis could lead to incorrect treatment and, in turn, to a worsening in the condition of the patient. Many of the cases were heavily medicated on admission. Indeed the aggressive behaviour which had, typically, precipitated admission for psychiatric treatment was found to be in some cases a manifestation of drug interaction effect. With cessation of the medication regimen, the patient's condition changed and frequently became treatable.

e) Long Term Care

Ms. Sylvia Thompson, of the B.C. Long Term Care Association, reflected the views already expressed by other speakers that misuse of medication among the elderly is a problem of significant proportions.

Ms. Thompson outlined a number of the more common complaints that are brought to her attention by Directors of Care within long term care facilities. These complaints include:

- Medication reviews often recommend a drug reduction or cessation, but the medication is often re-ordered for use shortly thereafter.

- Nurses note that drug regimens appear to be excessive. (In the light of workshop comments, Ms. Thompson noted that these observations were based on initial assessments, and that care should be taken to evaluate each individual patient's situation.)

- Concerns have been expressed about the number of medications being administered to individual residents during the course of one day.

- It is often difficult to get physicians to treat substance abuse cases.

- Patient assessments are often prepared by people who are not fully trained in the recognition and understanding of effects and side effects of medications.

- Nursing aides may be left to administer medications.

- Medication profiles are often haphazard and need to be standardized.

f) Home Support Services

Ms. Gloria Lifton, of the Home Support Association of British Columbia, noted that the size and needs of the home support client population in the province had grown dramatically in recent years. She indicated that changes to home support programs had not kept pace.

Ms. Lifton explained that home support workers are not professionally trained. With 12-16 weeks of community college or on-the-job training and experience, they are often expected to deal with many difficult and complex situations.

The patients of home support workers live in their own homes and are able to make individual daily living choices. They are not subject to the discipline of an inpatient setting in a hospital or other type of facility. Home support workers are faced with the difficulty of attempting to assess the implication of patients mixing prescribed drugs, over the counter medications, herbal remedies and alcohol. In addition, they may observe cases of over-medications resulting from the administration of prescriptions obtained from two or more physicians. Also, under-administration of drugs may be encountered because confused senior clients are hiding strong medications or are otherwise not consuming them in compliance with the regimen established by the physician.

In addition, home support workers must attempt to assess the impact of nutrition and general lifestyle, that may militate against health promotion and health maintenance.

Well-trained home support workers can monitor clients' health. They can evaluate living conditions and identify changes in patient conditions, and could report on these regularly to the Supervisor. Home support workers must have greater support from other health care professionals, including physicians, pharmacists and nurses. Home support workers need to be given more appropriate training, including on-the-job training.

g) Family Practice

Dr. David Blair, of the British Columbia Medical Association and a Family Practitioner, began his remarks by outlining three potential areas of concern with respect to medication and the elderly. From his perspective, problems might result from:

- What he prescribes for the patient.
- What others prescribe for the patient.
- What the individual patient administers to himself/herself.

In his own practice he attempts to use simple, straightforward approaches to medication decisions for elderly patients. He stresses the need for the patient to understand why the medication is being prescribed, what should be done to alleviate symptoms, what effects the patient should experience, and explains that the patient must be alert to other effects and report them back.

In addition, Dr. Blair made the following points:

- Drug administration control techniques are vital -- the patient must be given clear instructions on frequency of administration and if necessary, simple techniques to ensure that the routine is followed.
- "Drug holidays" are often beneficial, particularly with a new patient.
- Drug substitutions should be avoided where possible, in order to minimize patient confusion with drugs of differing colour and shape.
- Patients should be alerted to the potential dangers of mixing prescribed medications with over-the-counter medications and with alcohol.

- Prescription refilling control should be established -- the patient should be alerted to the dangers of unauthorized refills by a pharmacist without the physician's explicit approval.
- Good record keeping is vital in order to track changing medication ordering for an individual patient over the period of time -- this is particularly important in a group practice where an elderly patient may see two or more physicians within a clinic.
- The physician should discuss with the patient his/her general living conditions, lifestyle problems, anxieties and fears, difficulties with family relationships and any other matters that may impact on the patient's health status and which could have a bearing on medication use.

3. Summary

Led by Dr. Ronald Bayne, delegates commented on the issues presented as follows:

- Consumer awareness about condition, symptoms and changes in symptoms, recognition of effects of medication and an understanding of the dangers of mixing prescription drugs, over-the-counter medications and alcohol are essential.
- Consumers should be encouraged to discuss their condition, symptoms, and changes in symptoms, to ask questions about medication, to explain what other medications they are taking, and to discuss lifestyle issues, their fears and anxieties. Consumers should be made to feel comfortable in discussing these with all health care professionals and caregivers. General attitudes of health care professionals are important for consumers. Professionals must appear receptive, be attentive and responsive to consumers' concerns.
- All of the health care professions carry a responsibility to be knowledgeable about and able to educate elderly patients on the rational use of medication. Further professional education to this end must concentrate on:
    - Ensuring the availability of reliable data and methods.
    - Improving evaluation techniques.
    - Enabling professionals to produce good results.

- Communication among health care professionals -- physicians, nurses, pharmacists, nutritionists, therapists and home support workers -- must be improved. Improved team work must be sought.

- There is a need for greater diagnostic reliability and methods of improving diagnostic skills, particularly among physicians and other health care professionals who have been practising for a number of years.

- Health care professionals should be encouraged to develop greater critical appraisal skills of medical literature, medication information and the other volumes of information which comes to them.

- Further improvement to the Pharmacare date base and capacity are required, particularly the addition of diagnoses.

- Physicians in British Columbia should be more demanding of Pharmacare for drug usage review information to assist them in prescribing and medication reviews.

- The trial prescription project in British Columbia should be continued and expanded. Medication is dynamic and the effect of drugs differs from patient to patient and indeed, from condition to condition.

VI

CONSUMER ISSUES

A. PROBLEMS FOR ELDERLY CONSUMERS -- Dr. Peter Lamy

1. Introduction

Many problems of older consumers have been identified but there has been a general lack of acceptance and use of these in the daily approach to the older consumer. First and foremost, there is the continuing attempt to manage the problems of old age medically. An over-medicalization of the community-based long term care sector has resulted, even though it is clear that the etiologies of disease, disability and handicap are both physical (medical) and social. Lack of recognition of the importance of either of these factors will result in the same poor outcome.

The continuing "uniform" approach to the older consumer, using chronological age as the major base, contributes significantly to the problems. "Stipulated definitions," such as aging, elderly, old, 65 and over, senior, etc., ought to be discarded, and the consumer ought to be approached, not based on population statistics and as though the older consumer represented a very homogeneous entity, but on an individual basis. What needs to be accomplished is an individualized approach, taking into account a person's Activities of Daily Living status, dependency status (medical, economic, social) and other factors.

The older consumer must not be viewed as a client who has possibly assumed the "sick" role and who has ceded all decision-making to others. What is needed is an active consumer, not a passive participant, a consumer who still wants to participate in the decision-making process. To accomplish this, an interdisciplinary, community-based long term care system is needed.

2. Perceived problems of the older consumer

a) Confusion

Older consumers, along with still far too many health and human services providers, often accept problems as age-related. Aches and pain are still accepted cohorts of aging, yet they may not be. Sleep disturbances, very prevalent among the elderly, are still accepted as age-related problems. Dizziness often is found among elderly, and is accepted as an age-related problem. This type of acceptance, of course, often leads to a decision by the consumer not to seek help. Similarly, the current generation of elderly also often accepts problems stoically, assuming that there is no help and nothing can be done.

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Clearly, education must be provided, since a delay in seeking help can often worsen an existing problem erroneously ascribed to old age.

b) Misplaced pride

Older consumers may not wish to seek help, even through they may realize that they need it, because of misplaced pride. They grew up and learned to be self-sufficient. Now they do not wish to be a "burden" to others, a widespread fear among elderly. At the same time, they may still view available help as "charity" and will, consequently, not avail themselves of support systems they are actually entitled to use.

c) Embarrassment

Often a free interchange between provider and patient is hindered by the fear of embarrassment on the part of the consumer (and, unfortunately, on the part of the provider). Urinary incontinence is often not mentioned, yet it is known that about 30% of elderly, particularly elderly women, suffer from it. Unfortunately, probing questions regarding this wide-spread problem are too often not posed by providers, who often state: "they didn't tell me." That is unacceptable. In a similar fashion, sexual problems are often not discussed, nor do consumers complain about problems with dentures, preferring rather to do without them. Financial and family problems are too infrequently discussed, yet they may be the root of many adverse events in an older consumer's life.

d) Fear

Fear is often an overriding presence in the daily life of an older consumer. Fear that, if they visit their doctor, there may be bad news. The keystone to independent living is cognition, and they fear that the forgetfulness recently experienced may be the first signs of dementia. Perhaps if the consumer does not complain about a recent pain, it may not be cancer. Most often observed is the fear of being labeled a "complainer" or a "hypochondriac." There have been suggestions that older consumers overrun physician's offices with trivial complaints -- yet where should they go? It is not unlikely that the trivial complaint is really a forerunner of a major disease.

3. Actual problems of the older consumers

a) Approach

It took many years to realize that a baby is not just a "younger" adult, in terms of care requirements and, as far as drugs are concerned, in terms of drug-handling capabilities. The old, and especially the older-old, are still too often viewed as "older" adults. Yet, it has been clearly established that they have an altered drug-handling capability, based on altered pharmacokinetics (reasonably well accepted), altered pharmacodynamics (still too often overlooked), reduced reserve capacity, and an altered homeostatic system. Even though it has been shown that those weighing 50 kg or less (including many elderly women) are overdosed when a particular drug dose is recalculated in mg/kg of body weight, weight is often not considered in establishing a particular drug regimen. The difference in response to drugs between males and females widens with advancing age, another factor often not taken into consideration. Importantly, rational drug use can only occur based on a correct diagnosis, yet the atypical presentation of many diseases, including alcoholism, in the elderly is still often not factored in nor is the elderly's capability to follow a particular regimen.

b) Who is in charge

Older consumers face a bewildering health care system. Although lack of access is often cited as one of the worst problems, it is likely that lack of coordination is still worse. Everybody concerned with care of the elderly is probably better trained than ever before, yet the outcome is too often still very poor.

Specialists work in isolation and the old general practitioner is gone. Who coordinates the care? Who will answer the questions and concerns? Too often, nobody.

c) Data base and information exchange

Clearly, given today's information exchange capabilities, there is still a great void. A void when a consumer changes from one care sector to another. A void between the individuals caring for a particular consumer. Importantly, there is an information exchange lag that is unacceptable in terms of optimum patient care. Almost 30 years ago, the first documentation appeared in the literature about possible overdosing with thiazide diuretics, but it is only recently that this concept has been accepted in daily practice. The monograph for digoxin lists information on how to use this drug for children, adults and pregnant women, but none for the elderly who receive this drug most often. The information is restricted to the usual caution. Paraphrased it would read: start low, go slow, a dictum that has accompanied geriatric medicine for too long.

Health care providers often complain that elderly do not know how to correctly formulate their questions, do not itemize the information they wish to bring and the information they wish to take along after a visit. This most important part of the individual information exchange has been given short shrift and both providers and consumers must learn how to interact better.

d) Lack of recognition of individual problems

A consumer is a patient -- that still seems to be the approach. Yet an arthritic patient should probably not be given an 8:00 A.M. clinic appointment. It takes time to get moving. A diabetic patient should be given a dentist appointment consistent with the medication schedule and the medication used. Those depending on public transportation should be given appointments during the time of the day when public transportation is not overloaded.

There are many other similar problems that could be listed, but the overall approach, again, should be an individual one, tailored to the individual consumer's needs and abilities.

e) Can information exchange take place?

Many elderly consumers are citizens of a country to which they emigrated. In Canada and the United States they often cling to old habits and their old language, whatever it may be. Indeed, studies have shown that as many as 50% of some clinics' patients may not understand English well enough to have a good history taken or to follow instructions. In short, can the consumer read, write, speak and understand the language being used?

Of course, it has long been established that the elderly are often bewildered by the "professional" language being used. Professional language is often the verbal equivalent of poor handwriting!

Moreover, the patient is likely to be visually impaired, and written material that is usually used is not applicable to many elderly consumers. Many are hearing impaired and the verbal instructions must be tailored to overcome this problem. Many have arthritis and, possibly, a Parkinsonian tremor, thus are unable to even open the medication container or apply eyedrops.

With age, the lens of the eye yellows, and colour perception changes. Thus, it may be more difficult for elderly consumers to identify blue and violet and other colours, perhaps hindering them in identifying certain medications.

f) Drugs used

The literature is replete with accounts of drug use for the elderly and its possible adverse effects. Yet, a recent study showed that the treatment plan for elderly persons receiving psychoactive drugs was too often lacking indications of when a drug could be withdrawn. Often, an elderly person's drug regimen resembles a hospital formulary, to which drugs are always added, and none are ever withdrawn. While high drug use per se is not an indication of overuse of drugs, there is clear evidence that some drugs, such as digoxin, NSAIDs, H-2 blockers and psychoactive drugs are continued indefinitely, even though patient requirements may have changed. Dosages which are too high are common. The toxicity profile of drugs is not highlighted and thus, drug-disease interactions and cumulation of side effects (in the case of anticholinergics that may lead to an atropine-like psychosis) are major problems in long term care. While major problems have been identified in nursing homes, the entire alternate care sector (i.e. board and care, sheltered housing, etc.) has been totally overlooked. Home care, the fastest growing segment of the health care system, lacks structure and supervision. Indeed, the Royal College of Physicians reported in 1984 that lack of supervision of long term care drug use is one of the three major reasons for adverse effects in the elderly.

Drugs are still dispensed in the "traditional" vial, which elderly cannot open and which does not permit visual identification of the drug. Yet, compliance packaging, available for some time, is not used and/or reimbursed, even though it would add very little to the overall costs (it may in fact, reduce medication errors). It would be helpful to visiting nurses who may wish to audit a patient's regimen. Labels are still used in the traditional manner, completely overlooking the needs of the elderly.

The use of "alternate" drugs for geriatric patients has been suggested, but is not pursued aggressively. A study published by Gosney and Tallis in 1984 about adverse effects and interactions occurring in elderly patients after they had been admitted to the Liverpool Hospital in England, documented that 68% of these adverse events should have been avoided and another 18% could possibly have been avoided had health care providers used currently available knowledge.

g) Possible future problems

At least in the United States, there is an aggressive and determined effort to switch more and more prescription drugs to non-prescription status. This is justified by citing these efforts as being a response to consumer's desires for self-care and by figures which detail enormous savings to the health care system, in general, in physician visits that do not take place and reduced reimbursement for prescription drugs. Yet, some very potent drugs have entered or will enter soon into the non-prescription market, such as diphenhydramine, ibuprofen, promazine, ranitaidine, cimetidine, sucralfate and many others. Elderly persons have presented at emergency rooms with the symptomatology of congestive heart failure, which dissolved when it was recognized that the patient had taken more than the recommended OTC dose of ibuprofen, which had caused sodium and water retention. Non-prescription drugs make up 40% of all drugs used in nursing homes and about 60% of all drugs used in the alternate care sector. If that trend continues, it is imperative that better labeling, geared to the need of the elderly consumer, be made available.

3. The system

The Health Care System for the elderly is ponderous and inflexible, too often providing poor access to the elderly. It is still based on a hierarchical mode. Elderly consumers, possibly dissatisfied with the provider, do not change for fear of opposing an autocratic system. (On the other hand, they often resist change out of a misplaced, but very strong loyalty). Moreover, the system still essentially trains health care providers in acute care and they in turn, try to translate that knowledge into long term care, an impossible task. For example, outcome goals in long term care are often only the maintenance of the consumer's quality-of-life and no longer "cure."

There is still lack of recognition of the role of nutrition in health and disease and too little emphasis on rehabilitation and preventive care.

The reimbursement system does not allow lengthy interactions. Compliance is still pursued, even though this outdated and autocratic term has been shown to be ineffective. Cooperation and adherence to a mutually-agreed upon regimen can accomplish more, as can an understanding of a particular consumer's needs and daily routine. New efforts to help elderly consumers occur often, but unfortunately, often do not accomplish what they set out to do. Reduction in prescription drug prices if the consumer buys a six-month supply would appear to be helpful to many elderly. Yet, if the physician wants to change that regimen one or two months into the regimen, conflict between consumer and provider results. Direct-to-the-consumer TV ads may appear to be helpful, but may also result in overuse of a particular drug, based on consumer demand.

4. Summary

There is widespread a problem of mis-medication among older consumers. That problem is likely to grow unless timely interventions are made. The problem of mis-medication among the elderly reflects a series of weaknesses throughout the drug therapy delivery system. The good news is that most, if not all of these problems are amenable to change, given the right approach and funding.

B. STRATEGIES FOR ELDERLY CONSUMERS -- Ms. Madeline Feinberg

1. Introduction

I am delighted to be invited to participate in your initiatives on improving medication use among your older population. I wish I could report that we have had a similar opportunity to address these issues on an interdisciplinary basis back home in Maryland, but in fact you are way ahead of us. It is an honour to be asked to share our experience with your group.

I will speak from two perspectives today -- first as an "academic" because I teach at the University of Maryland School of Pharmacy and serve as the Director of the Elder Health Program. This is part of Dr. Peter Lamy's Center for the Study of Pharmacy and Therapeutics for the Elderly. My second perspective will be as a direct provider of pharmaceutical services to over 400 frail elderly and handicapped. So the other hat I will wear for you today is as Director, Home Care Pharmacy Services, for the Accredited Surgical Company of Columbia, Maryland.

2. The Elder Health Program

Ten years ago Dr. Lamy received a rather unique grant from the United States Administration on Aging to develop a consumer drug education program for older adults. It was based on his assumption that we would enhance medication awareness and improve drug use by elderly if we present drug information and education programs to ambulatory elderly. Our target audiences would be elderly who attend senior centers, senior high rise social and recreation activities, church organizations and others. We offered a two credit elective course to pharmacy students in all three professional years and trained these students on how to present medication information to older adults. We stressed, in the didactic portion of the course, the differences between older and younger patients, both physiologically, pathophysiologically and socioeconomically. We paired our students with retired pharmacists and together, student and retired pharmacists, presented lectures on medication to senior citizens. Students would learn first-hand, about the needs and concerns of the older patient. They learned "geriatric pharmacology" by listening to the experiences of the older patients. They brought back to the school an awareness of the differences between older patients and the "normal" adult patient. Over the years our curriculum has begun to incorporate a geriatric component into all the courses and we hope that our students, by virtue of their exposure to this patient, will ask the questions that raise awareness of how the elderly may respond differently.

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Compliance with the prescribed medication regimen is one of the most important topics we deal with in our Elder Health programs. We take a consumer-oriented approach to medication management. We want the older patient to feel comfortable asking about his diagnosis, why is the medication being prescribed, what is it supposed to do, how is the patient supposed to feel when he begins taking the medication, how will the patient know if the medication is working. We want the older patient to feel comfortable asking doctors and pharmacists how the medication should be taken, can it be mixed with other medications, what side effects can be expected, how can side effects be avoided, what to do if side effects occur. We use examples when we talk about medications. If a patient takes a medication for angina, he will know it works because the pain will not occur when walking or on exertion. But if the medication is for a rhythm problem, the patient may need to be seen by the doctor, wear an EKG monitor and then the effectiveness of the medication can be determined.

Our Elder Health Program teaches the student to look beyond the medical problem of the patient. Life stress and life satisfaction may be more important than the medical diagnosis.

When we stress compliance, we need to be certain that the older patient is able to read, open the bottle, hear our directions, afford the medication. We need to be concerned with the nutritional status of the patient, and we need to be concerned with the social environment.

Our students quickly learn that these are important issues in medication management and do clearly impact on the patient's response to the medications as prescribed.

The Elder Health Program has expanded and grown based on our experiences in working at senior centers, housing associations and at other sites where elderly congregate. We quickly learned that we were probably missing 90% of elderly who do not participate in social and recreational activities in an organized fashion.

At an educational level we developed the Elder Visitation Program, which is part of the Elder Health Program, and serves as a one-credit elective course for pharmacy students in the first and second professional years. Students who select "Elder Viz," as it has been named, visit an elder in his or her home on a weekly basis and report back to class on what they have learned about their elder. Students keep a journal of their experiences. We hope that this relationship between an elder and the pharmacy student will begin to dispel some of the myths of aging that may be held by young people. Students quickly learn that elderly are not senile, boring, demanding and sick. Students also discover the wealth of senior services that are available to our elderly in Maryland, and each student is expected to identify a particular senior service that his elder uses, or could use, and present on that service to the group. Our students' evaluation of this course tells us that the senior services component will be most useful to them as practitioners because they see the corner pharmacist as a key in the referral process for the older patient.

A third component of the Elder Health Program is our Caregivers' Program. Again, our experience at senior centers told us that we were not reaching the home-bound elderly. Many elderly who attended the senior centers were caregivers, taking care of spouses or parents who are frail and home-bound. We have tried, at least successfully, thanks to the financial support of the Governor of Maryland's Office of Justice Assistance, to develop an educational program for the caregiver of a frail elderly or handicapped patient. Our emphasis would of course be on medication management, with preventive care as an important component of the program. Dr. Lamy and his Center have just developed a 200 plus page curriculum for the caregiver, which guides the user through a discussion of community resources, guidelines for medication management, and finally gives a disease by disease description of the management, including drug use, for most chronic illnesses suffered by older patients.

3. The Elder Care Program

The success and widespread knowledge of the Elder Health Program, notably the consumer drug education portion, has come as a result of the Parke Davis Company support for this program as a national model for their Elder Care Program. Parke Davis has reproduced for us 15 pamphlets on topics of medications and wellness for the older consumer. They have funded the production of three audiovisual tapes on the role of medications in the management of the ambulatory patient (**The Medicated Generation**), the long term care patient (**The Silver Lining**) and the home care patient (**Pharmacy in Home Health Care**). These videos were made for public television, and the first has won several international awards and has been shown on public broadcasting nationwide, and in some parts of Canada as well.

Parke Davis has funded the Parke Davis Center for the Education of the Elderly at the University of Maryland School of Pharmacy. This center publishes the Elder Care Newsletter on a quarterly basis, a newsletter that abstracts the medical literature on issues of drugs, diseases, nutrition and social issues in aging and the elderly. It is mailed to over 30,000 health care professionals nationally and internationally.

Again, thanks to the support of the Parke Davis Company, we are able to offer pamphlets to consumers and health care providers to assist in teaching the proper use of medications. To date, we have mailed close to 1.5 million pamphlets around the country and to Canadian providers as well (of course on a more limited scale), and we would be delighted to support your efforts in any way you may see fit to use the materials that we have which best meet the needs of your older patients.

I am aware that Parke Davis, Canada, has also funded several audiovisuals which were made here in Canada. You may wish to contact Parke Davis as to the availability of these materials.

4. Pharmaceutical services for older patients

It was inevitable that all this exposure to the older consumer would force me, as a licensed pharmacist, to consider developing services for this patient that would optimize medication use, reduce the opportunity for drug administration error and assist in drug monitoring. I felt that we need to develop compliance packaging systems for the older consumer and his caregiver and was given the opportunity to build a new aspect of long-term care services within Accredited Surgical Company that would focus on compliance and the home care patient. Accredited Surgical Company (ASCO) had, for 35 years, provided institutional pharmacy services to, currently, over 6,500 nursing home residents in 40 long-term care centers in the Washington, D.C. area.

I brought along samples of our compliance packaging system and am frankly delighted from the exhibits on display here at your meeting, that you already are familiar with compliance packaging, and some of the pharmacists I have talked with, are using, or considering using medication compliance systems to improve drug-taking among elders.

Briefly, the system I am showing you is a card, looks like a bingo card, but contains 31 blisters, one for each day of the month. Each card has times of the day across the top. For example, the card labelled "morning" contains, in each blister for each day of the month, all the doses of medication that have been prescribed for that morning. The blister contains both prescription and non-prescription tablets or capsules. The card bears a label for each of the medications contained on the card. The physical description of each tablet or capsule appears on the reverse side of the card.

This card is designed for the older adults to administer their medications to themselves or to a spouse. In my practice, we supply these cards to people who operate board and care type homes, which in my area, are known as residential care facilities (as opposed to nursing home facilities). The people who live in the board and care setting can no longer live independently, quite often because they cannot manage their own medications. So they require some assistance or supervision. However, our state laws prevent the operators of these board and care type homes from giving medications. So there is quite a bind. We find that the compliance card assists the staff of the board and care home by helping him or her help the resident take the appropriate medication at the appropriate time.

Our pharmacy provides computerized medical records, including monthly physician order sheets and medication administration records to assist in recording medications taken.

In addition, we in-service staff on medication administration, and monitoring for side effects. In two of our facilities, our pharmacy provides consultant pharmacist services for drug regimen review on a quarterly basis, and the facility pays the pharmacy for the consultant services. However, most facilities have not reached this level of "enlightenment." The value of the service is perceived in terms of the packaging, the ability to audit the system and the reduced waste and increased safety. In most of the homes, the families pay a premium charge of $10.00 monthly to accommodate the increased costs of preparing medications in these cards.

The state Medical Assistance Administration (pays for prescriptions or indigent patients) has considered reimbursing the pharmacist an additional rate for using compliance packaging, but no decision has been made, and we are not optimistic, due to cost containment issues within the State Department of Health.

5. Conclusions

As is generally agreed by most providers here today, pharmacy brings a special perspective to the proper management of medications. It seems that here, as well as in the United States, we have not yet approached these solutions on an interdisciplinary basis. I find that social workers feel they can identify medication problems which may be referred to the physician for solution. Nurses monitor medications, but if given the choice to use a pharmacist, they will do so, to better concentrate on nursing tasks. Yet the reimbursement systems and our own perspectives, really do not permit a true interdisciplinary approach to the problems faced by older patients.

In our country, some physicians want to dispense medications, thus bypassing the pharmacist. Yet the pharmacist brings packaging expertise, drug knowledge and is widely available to work with patients, caregivers and others involved in the long term care needs of the older patient. But we still tend to work independently of each other. There needs to be more communication, not only between providers and patients, but among the providers of all services to elderly.

C. COMMENTARY ON CONSUMER ISSUES -- Dr. Ruby Grymonpre

Dr. Grymonpre pointed out that problems with respect to medications and the elderly are universal. Knowledge of the patient's background and general lifestyle, living conditions and personal problems and issues must be understood. A system-wide approach is necessary, a medical focus alone is insufficient. Social support services are essential to fostering good care.

Dr. Grymonpre reported that in a controlled test on 862 patient admissions of people over 50 years of age in a large Winnipeg hospital, 83% were found to be already taking some form of medication and 23% were admitted with drug-related adverse patient effects (DRAPE). These adverse drug reactions are due in part to intentional non-compliance, unintentional non-compliance and incorrect diagnoses and therapeutic decisions. Thus, many of these effects could have been preventable.

Dr. Grymonpre explained that communication problems can be legion among elderly consumers and must be dealt with by tailoring communication support to individual consumer's needs. Such support will include language, as many consumers in Canada today do not speak or fully understand English.

Broad appeals to a mass audience are not enough to change behaviour. Elderly consumers need one-on-one discussion regarding their medication with both the physician and pharmacists.

Compliance instructions to elderly consumers are essential, but are only a beginning. Consumers must be made aware of drug effects, must know how to recognize these and must be alert to desirable side effects.

Dr. Grymonpre described the Medical Information Line for the Elderly (MILE) being used in Manitoba to support rational, informed medications utilization. The number (some 10,000 calls to date) and type of inquiries received, indicate the need for better communication between professional care givers and consumers. Dr. Grymonpre explained that frequently callers on the MILE line had already been given information on medications by either or both of their physician or pharmacist and their call was to provide them with additional information or to clarify some point that they may have forgotten. MILE line users are predominantly consumers with 75% being over 65 years of age. Fifteen percent of callers are health care professionals. Confidentiality is a basic feature of the MILE line program, so routine information is not fed back on callers to either a pharmacist or a physician. However, in an emergency situation, a MILE line program operator may decide that communication back to a pharmacist or a physician is necessary in the patient's best interests.

Analysis of the MILE line calls shows that senior consumers generally do not recognize the pharmacist as an information resource. The MILE line program is not seen as a substitute for the pharmacist, but rather as a complement, a provider of general information. No attempt whatsoever are made to diagnose or treat. The MILE line's overall effectiveness has not fully been evaluated.

With respect to pharmacist education, Dr. Grymonpre noted that little of the undergraduate pharmacy training program is devoted to the needs and problems of consumers. In Manitoba there are plans to rotate pharmacy students through the MILE line system to provide a learning experience, particularly, on how to communicate with elderly people and how to appreciate the elderly consumer's needs, and to help improve the student's knowledge about available drugs and their effects on elderly persons.

Dr. Grymonpre emphasized the need to "know before you go," urging that senior consumers be advised to question the pharmacist about the drug, what it is for, what effect it is likely to produce, how to administer it, etc.

Finally, Dr. Grymonpre noted that increased attention must be given to drug cautioning programs, including stickers on over the counter drugs that show by symbol or code how the drug should be taken and what precautions to observe. Such efforts contribute to the creation of a more informed and aware consumer.

D. CONSUMER PROGRAM DISPLAYS AND VOTING

The primary purpose of this two-day workshop was to develop program ideas that might be implemented in British Columbia. The first day was devoted to generating and expanding upon ideas related to elderly consumers of medications.

Workshop participants were asked to consider project ideas pre-viewed by the Workshop Planning Committee and presented in poster format, programs which may have been referred to in the mornings' presentations and subsequent discussions, and ideas which they had brought with them from their own settings or experiences.

Participants were asked to vote on the programs presented in the poster display, using a sticker to indicate each of their five preferences. The cumulative ranking of the 21 programs displayed is presented below. Descriptions of the poster programs are provided in Appendix A.

Program ideas -- consumers

Posters	Votes	Rank
Before You Take It - Talk About It	29	3
Medication Information Line for the Elderly	33	1
Elder - Ed: A Model Education Program	4	12
The Medicine Your Doctor Prescribes	4	12
Medicine Minder Project	3	14
SRx Regional Program Medication Education	10	9
The Medicine Chest	7	11
Pharmacy Pill Pak	33	1
Brown Bag (Medication Awareness Event)	29	3
Elder Care Program Medication Management	25	5
Using Symbols to Provide Drug Information	10	9
Time Of Your Life (T.O.Y.L.) Trade Fair	0	-
Medication Instruction Module	25	5
Elder Care Program Medication Management	0	-
Project Slashes Patient's Average Tablet Tally	0	-
Personal Medication Records	22	7
Drug Compliance Card	1	17
Educational Videos	2	15
The Wise Use of Drugs	1	17
Consumer Information (Brochures, Pamphlets, Etc.)	2	15
Drug Caution Program	15	8

E. CONSUMER PROGRAMS: RECOMMENDATIONS FROM SMALL GROUPS

Delegates were organized into five working groups, the constitution of which reflected the overall professional and interest mix of the whole group. Each group was assigned a facilitator and record-keeper from the Workshop Planning Committee.

Working groups were presented with a ranked listing of poster programs and a list of new ideas which had emerged over the course of the morning. To these, participants were asked to add their own new ideas. From the total list, groups were asked to select four or five ideas to develop for presentation at a plenary session.

Groups were asked to develop project ideas within the following framework:

- Project title.
- Target group.
- Message.
- Medium.
- Implementation resources.
- Implementation method.

1. Initial plenary session presentations

There were two rounds of reporting to the plenary group. First, a run through of the popular and/or new ideas discussed in the small group sessions and, second, a development of some of these. The project ideas which emerged from the workshop exercise are presented in summary by group below.

a) Group No. 1 -- program ideas

- ► A pharmaceutical packaging system aimed for particular application to elderly consumers.
- ► A medical awareness week with primary emphasis on educational messages and dissemination of information for elderly consumers.
- ► An elder care program -- should be broader than just the medication-oriented program. Aimed at generally raising the consciousness and awareness of seniors toward health care issues.
- ► Development and implementation of a rational drug usage symbol or logo.

b) **Group No. 2 -- program ideas**

- An investigation and survey of programs being carried out in other jurisdictions, in order to develop a better knowledge base on programs and techniques that can be aimed effectively at elderly consumers.

- A communications program to ensure basic understanding of medication and rational drug use by all senior consumers, regardless of literacy levels and ethnic and language differences.

- Promotion of a "single pharmacy" concept for elderly consumers to improve communication and personal care relationship between pharmacist and consumer.

- Creation of a comprehensive computer data base linking physician, pharmacist and possibly other health care providers on patient profile, health status, medications past and current, allergies and drug reactions, etc.

- A prescription refill reminder system to ensure that prescriptions are refilled if necessary to avoid a lapse in medication therapy; could also help ensure that unauthorized refills are avoided.

c) **Group No. 3 -- program ideas**

- Comprehensive evaluation of three drug administration methods: (1) medicine chest, (2) dosette, and (3) blister pack, designed to assist elderly consumers with sensory and cognitive impairment. Pharmaceutical manufacturers should be asked for financial and other resources. Involvement of all health care professionals and consumer interest groups in the evaluation would be important, as the outcome would be of interest and value to all concerned.

- An education program for senior consumers, involving home support workers in educating elderly people in their own homes. Such a program would enable elderly people to exercise more control over the administration of their medications.

- Talk shows -- opportunities for physicians and pharmacists to appear on local cable television stations and radio phone-in programs and offer advice and instructions to elderly consumers.

d) Group No. 4 -- program ideas

- Talk-back tape -- a medication information tape which consumers could access by telephone. The tape could provide general information on taking medications, or more specific information on administration and expected effects/side effects of a particular drug.
- Internationally recognized medication awareness symbol .
- Educational Directory -- listing of educational programs in the United States and Canada that address some aspect of issue of medication use by elderly consumers.
- "Know Before You Go" program -- designed to encourage elderly consumers to discuss the prescribed and over-the-counter medication with the pharmacist before leaving the drug store -- to produce a more informed elderly consumer.
- Advertising -- legislation should be developed to ban certain over-the-counter products and place limits on prescription drug advertising. This initiative would require the involvement and approval of the federal government.
- Drug packaging improvement project -- labels, lids, etc. must be improved in order to enable elderly consumers to read instructions and to be able to open and re-seal medication containers. The overall objective of this program is to enable the senior consumer to take more complete charge of his/her own medication administration.
- Rebate or reward for unused medications returned to pharmacist.
- Video tape messages made available to senior citizens and consumer groups -- could be used in conjunction with senior's social groups and counselling programs.

e) Group No. 5 -- program ideas

- Mass advertising aimed at all areas of society to encourage a broader understanding of senior's needs in general health and in medication use; could be used to promote a senior's neighbourhood watch program.

- Promotion of simple, effective language on all health information services to senior consumers. Communication must also recognize language and ethnic group differences and literacy levels.

- A micro-chip medication reminder system -- a medication bottle or other container would incorporate a micro-chip that would produce a signal when it was time to administer the drug.

2. Review of recommended programs in more depth

a) Group No. 1 -- recommended programs

i) Medication awareness symbol

This program would be targeted to the elderly and to all caregivers. The message is that anyone in targeted groups should be prepared and willing to seek information, that is, the symbol would create the awareness of the need to seek information. A possible slogan to accompany the symbol -- "If in doubt ... find out!"

The symbol should be simple and universally understandable with strong visual impact. The symbol could be used on electronic and print media.

The resources required to produce a symbol would include creative developmental resource plus a public or private sector sponsor to provide funding for dissemination of the symbol and its message. B.C. Pharmacare could play a central role in implementation of the symbol.

The symbol could become national and international in scope, calling broad attention to the issue of rational drug use by the elderly and the need for greater awareness by elderly consumers to seek information on medications and medication use.

b) Group No. 2 -- recommended programs

i) Telephone information line

This is the same idea as the service provided by the MILE line in Manitoba. It is important to advertise the line in the media, perhaps even through a live phone-in show.

A media-promoted information service would require a glamorous punchy message and format. The message to be put across is that seniors are alive -- in control -- have alternative choices.

The info line should focus senior citizen's attention on symptom recognition, including depression, anxiety, pain, swelling and sleep disorder.

ii) Intensive media campaign

Pay a public relations expert to design and distribute ads to be aired on relevant T.V. shows such as "doctor programs" or shows presented on the Knowledge Network.

The campaign could be directed at home-bound elderly who watch the T.V. for entertainment and information.

iii) Brown Bag plus Drug Profile or Passport

The idea of the "brown bag" is that people bring all their medications -- both prescription and over-the counter -- to their physician, pharmacist or other caregiver on a regular basis for monitoring and analysis. It may be possible to offer some reward to those who routinely comply with the brown bag program -- such as removal of sales tax for new medications purchased. The inclusion of the drug passport with this program may facilitate record keeping by professionals.

c) Group No. 3 -- recommended programs

i) Before you take it -- talk about it

This is the program developed and implemented by the National Council of Patient Information on the United States. The theme could be developed through an information brochure, aimed at senior consumers and distributed among seniors social groups and through seniors counselling organizations. The content of brochure must be developed by health care professionals.

The brochure could be advertised and also could be complemented by television and radio public service announcements, along the same theme of "before you take it -- talk about it." Also, pharmacists and other health professionals could be involved in local cable station talk-shows and radio phone-in shows to extend the general message.

Resources for printing would be required.

ii) Medication passport

A passport, detailing what and when medications were prescribed, could be used essentially as a consumer reminder and consumer monitoring device. Responsibility would rest with the senior consumer to ensure that the passport was presented and completed by the pharmacist as each prescription was filled. The passport could also be a vehicle for information messages designed to stimulate the elderly consumer to probe why the medication is being given, for what purpose, what effects to expect, what to do if any unexpected reactions take place, etc.

Resources required would include personnel for developmental work, materials for printing and distribution.

iii) Birthday bag (drug bag)

This is a modified version of the "brown bag" program. Using a common identifiable format, (perhaps a "purple bag"), a drug bag would be customized to each senior consumer with name and birth date. The drug bag would be used on or about the consumer's birthday to bring in current and unused medications to the pharmacist for checking, verification against outstanding prescriptions, counselling on continuation, prescription refill determination, etc. A drug passport could be contained within the birthday bag.

d) Group No. 4 -- recommended programs

i) Trial prescription

This is the program described by Mr. Waller earlier in the day. The program is directed at all first-time users of a drug. The "message": of the program is, basically, that not all drugs prescribed by physicians have the expected or desired effects on their patients. Rather than have patients pay for a lengthy course of medication, they should be given new drugs for a trial period after which their effect is assessed.

It is vital that the physician, pharmacist and consumer are all in accord and have a common understanding of the objectives and expectations of the trial prescription program. Information must be given to the consumer on the need for prompt evaluation during administration of the medication on the trial prescription and for prompt action following completion of the trial prescription.

If the desired effects are achieved, the physician may decide to continue the medication. If not, the prescription can be changed or cancelled.

ii) Bubble pack/blister packaging

In order to better meet the needs of elderly consumers, the potential for individualized consumer packs should be explored. Blister or bubble packs available in the United States are not readily available in Canada. Such packaging does much to improve consumer compliance with prescribed medication regimens by organizing and grouping drugs in a clear sequence.

iii) International symbols

A system of internationally recognized symbols should be developed for use on medication packaging and information materials. These symbols would serve the same function as traffic symbols or other existing symbol systems to communicate drug information quickly and effectively without language barriers.

The program would be targeted particularly at illiterate consumers and members of ethnic groups who could not readily communicate in French or English.

iv) Brown bag

This program was presented and discussed by other groups. It was endorsed by this group with the added emphasis that all caregivers should be involved in promoting the program and encouraging compliance in order to ensure its success.

e) Group No. 5 -- recommended programs

i) Mass audience approaches

Campaigns designed to reach isolated elderly must be developed. The first challenge will be to identify who these individuals are. Diverse efforts -- such as door-to-door pamphleting, neighbourhood watch programs and media campaigns -- will be required to reach these people. The message of these efforts should be "this is who's out here to care for you."

ii) Buddy system

A buddy system employing peers and other community volunteers as monitors of home-bound seniors should be developed. This program would convey the message to seniors that "someone cares" and ensure that seniors' needs are not neglected. Again, a particular challenge will be to identify and reach the isolated elderly.

VII

PROFESSIONAL ISSUES
RATIONAL DRUG USE: SHARED RESPONSIBILITY

A. INTRODUCTION

After brief introductory remarks by Workshop Chairman, Dr. David Blair, Dr. Duncan Robertson, Medical Consultant to the Seniors Drug Action Program, provided an overview of the intended focus for day two of the workshop.

The major objective was to reach consensus on programs geared to professionals which could be developed in B.C. and which would improve the rational use of medications by elderly consumers. Dr. Robertson pointed out that professional issues revolved around questions of 1) diagnosis, 2) compliance, and 3) administration of medications. The goal of rational medication use is a shared responsibility in which all concerned have a major contribution to make. Several professional perspectives would be presented during the first half of the day. Keynote speakers from Medicine, Pharmacy and Nursing would address the responsibility of their profession.

Small groups would be asked to consider programs geared to distinct professional groups over the course of their work in the afternoon. The groups were to be focused as follows: physicians, pharmacists, health systems and nursing.

B. RATIONAL DRUG USE: THE ROLE OF PHYSICIANS

-- Dr. Michael Gordon

For the physician, the expected level of knowledge in terms of clinical diagnosis and utilization of medications must be combined with good judgement, a healthy skepticism about new medications, appropriate communication skills and a willingness to listen to concerns shared by patients, their families and other health care professionals.

Various studies acknowledge that many doctor-patient contacts result in a written prescription. It has been estimated that at least half of all patient-physician contacts end in prescriptions being written, but only a small proportion of all the potentially available drugs are used commonly, and the vast majority of prescriptions are written for a relatively small number of frequently used drugs. At any given time, an individual over the age of 65 is likely to receive anywhere from four to six drugs on a daily basis.

A number of factors have been implicated as being responsible for physician prescribing practices, including attitudes about older individuals, a sex bias suggesting that females might be prescribed psychoactive drugs more readily than males, the impact on prescribing habits that might result from fee-for-service vs. salaried health care delivery systems and physicians' interpretations and approaches to various psychosocial issues. The pharmaceutical industry has acknowledged some of these factors and utilizes certain stereotypes in their advertising, so that one often finds portrayal of older "frail" individuals in advertisements for psychoactive drugs as female, rather than male.

2. Education

The issue of education of medical students and physicians must be evaluated in order to understand the dynamic process that goes into the final medical act of drug prescribing. Education can be divided into undergraduate, postgraduate and continuing medical education activities.

Undergraduate medical students generally have a course of pharmacology in the first year of study and some integration of drug usage during second and third years, which is usually related to specific subject areas such as pediatrics, cardiology, etc. During the clinical clerkship, most medical students learn some of the practical activities of drug prescribing, but this is usually in a hospital rather than ambulatory setting. The internship is primarily an "apprenticeship" and although there is some supervision in drug prescribing, once again the vast majority of experience is in the acute care non-ambulatory setting (with the exception of those medical students who go into family practice).

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During the **postgraduate** years, drug prescribing habits continue to be learned through the "apprentice" system with further information coming from the medical literature and lectures. There may be some course work and perhaps some input from pharmacy/pharmacology consultants in certain hospitals that have such individuals on staff at this stage.

Once a physician is in practice, **continuing medical education** (CME) supposedly would be the method of maintaining expertise in drug usage. The source of continuing medical education material and the type and frequency of such CME activities, should be evaluated. Issues such as what responsibility the individual physician must take in CME and the responsibility of licensing bodies, and what monitoring techniques should be utilized, have yet to be adequately addressed. Continuing medical education activities include lectures, rounds, journals of various types, including peer review and "throw always," as well as various monographs, bulletins and books that physicians have available to them.

3. Prescribing habits

There are many influences on physician prescribing habits, including the various journals and monographs they receive, as well as lectures which has an academic base (rounds, clinic days) and lectures supported and/or promoted by the pharmaceutical industry. Many physicians depend on the experience of respected colleagues that may come on an informal basis, or following a formal consultation for prescribing advice. Advertising through the postal system and in journals may also have an impact on the prescribing habits of physicians.

Many publications primarily supported by the pharmaceutical industry have review articles dealing with various medical disorders and the usage of medications, which are written by "experts" but do not undergo the usual "peer review" process. These reviews should be kept in a perspective by the reader because of the source of funding and distribution of the journals. Even peer review journals receive a great deal of support from drug advertising. Bulletins related to drugs may be prepared by medical associations and are usually considered to be reasonably reliable and unbiased and publications such as "The Medical Letter" are considered by many physicians to be a good objective source of drug prescribing information.

4. The pharmaceutical industry

The initiatives of drug companies are to influence physicians to use their products and attempts are made to impress physicians with the efficacy/safety and advantages of their particular medications.

The issue of pharmaceutical samples is an interesting one, in that an individual physician may find some usefulness in having small supplies of medications to initiate therapy in a patient without "cost" to the patient. Ultimately, of course, the drug may be used on a long-term basis and the cost will be borne not only by the patient but the general public, who ultimately have to support the cost of samples. A great deal of pressure comes from the pharmaceutical industry to influence physicians to do everything possible to utilize a medication so that it would be included in a drug plan coverage formulary, if the Province has a restricted formulary.

5. Problems in prescribing for older patients

In older individuals with non-specific complaints, it may be tempting for a physician to prescribe a medication without a specific diagnosis. It is important to build in a system of monitoring by physicians and other health care professionals, as well as a method for physicians to participate in post-marketing surveillance of drugs. Among the special concerns that physicians must face is the use of psychoactive drugs, the tendency for polypharmacy and the difficulty in developing educational activities for patients and families. In addition to this is the problem of rising costs of individual new drugs and the total cost to the health care system and the drug benefit programs as new medications are made available.

There will be a greater number of older individuals in Canadian society during the next few decades. It is the responsibility of the medical profession to make sure that whatever medications are already in use and which will become available will be used appropriately and effectively in a manner that will afford our patients the greatest potential benefit. We must work within an economic framework that is acceptable to our society and utilized responsibly by all of us including physicians, patients, pharmacists, other allied health professionals and the provincial and federal governments.

Some specific issues and actions include:

- **Knowledge base**. Many physicians have had an inadequate training in the basic physiological and pharmacological issues related to drug prescribing for the older population. This results in inappropriate dosaging of drugs as well as drug combinations that may increase the likelihood of adverse drug reactions.

  Solution: Ongoing educational programs directed to all levels of medical education from undergraduate through continuing medical education.

  Action: Examine curriculum in all medical schools to assure that pharmacology and therapeutics for the elderly are included. Include special geriatric rotations as mandatory for family practice and internal medicine.

- Elderly patients have **multiple medical problems** and symptoms which may result in multiple drug therapies -- so called polypharmacy -- which may result in an increased tendency for adverse drug reactions. The delineation of definable clinical entities and their manifested symptoms can be somewhat difficult and may result in inappropriate prescribing.

Solution: Increased understanding by physicians of **"problem-related" diagnoses** as well as organ-specific-related diagnoses. Symptomatic therapy should be avoided unless clearly defined as part of a clinical situation that may be amenable to medication therapy.

Action: Mandatory rotation for family medicine and internal medicine rotations with special emphasis on ambulatory care and drug therapy.

- The use of **multiple medications** may cause inadvertent errors by the patient especially as clinical conditions vary with time. Systems of clinical and drug monitoring must be built into all types of practice.

  Solution: Periodic reviews of all medications should be made concurrently with physicians and patients or with allied professionals (depending on the clinical setting) to make sure that all unnecessary, "no longer needed," duplicated, or excessive dosage drugs can be removed or their dosage modified. The physical removal of drugs by the physician during an office visit or house call can help avoid the tendency to "hoard" drugs or to misunderstand directions and inadvertently resume presumably discontinued medication.

  Action: Increase home visits by health carte professionals or trained community workers to monitor drug use and compliance. Expand role of senior centres to home drug review programs utilizing public health nurses, community pharmacists and other health care workers. Single source drug dispensing and "smart card" or computer system would decrease likelihood of multiple prescribing and dispensing.

- Problems with **communication** related to drug prescribing and changes in drug therapy often leads to misunderstandings as to how medications should be taken.

  Solution: Repeated verbal instructions with appropriate patient feedback as to instructions can be instituted as part of normal office practice. Complementary written instructions can be useful especially during changes in medication therapy. Cooperation with pharmacists and community health care workers (VON, etc.) can be used to reaffirm instructions and evaluate for compliance.

Action: Consider methods of updating records in pharmacy and in patient's home as to drugs and dosage -- utilize community workers for monitoring as per 3. single source pharmacy or computerized system with updated patient printout should be considered.

- Physicians may have difficulty **evaluating** all the medications that a patient may have received from other physicians or institutional settings. A primary care physician's medical record may not truly reflect the medications and dosages that a patient may in fact be taking.

  Solution: Periodic office reviews of medications by the physician with the patient or with the use of allied health professionals may decrease this problem. A comprehensive computerized medication prescription system will also help decrease the likelihood of multiple physician prescriptions and multiple pharmacy dispensing.

  Action: Centralized computer system for patients. Printouts for patients to bring to M.D.s might be made available to assure that family M.D. and pharmacy knows of all drugs.

- A physician's tendency to utilize "new" therapies based on pressures from patients, their families and representatives of the pharmaceutical industry. This results in newer but not necessarily (in all cases) better medications being used with often significantly increased cost of the newer drugs.

  Solution: Ongoing education and critical review of medications should be available to all practising physicians using the model similar to the presently available "Medical Letter," but distributed by the professional body representing physicians. This can, on an ongoing and cumulative basis, give recommendations as to medications, their relative costs and whether or not "new medications" have any significant benefits over other medications and the implications of utilizing a newer medication. An ongoing and frequently updated reference guide should become a standard for all practising physicians.

  Action: Updated and updatable news letters (e.g., Ontario "Medical Letter" or "Drugs of Choice") -- sent to all M.D.s as part of the health insurance plan participation.

- Physicians often prescribe medications in **quantities** that they believe are either "legislated," appropriate or "cheaper" or are "requested" by their patients. This may not result in the most cost effective means of dispensing medications. It may lead to unnecessarily frequent dispensing of medications on the one hand or excessive amounts of medications made available on the other hand with all the implications for danger, waste and inappropriate use of the medication.

Solution: Clear guidelines should be developed for the frequency of prescribing of certain medications, based on whether or not they are potentially dangerous, or used for stable conditions that require prolonged treatment. Consideration must be given for amounts that may result in physical deterioration of medications.

Action: Special reduced dispensing fees should be legislated for drugs prescribed for long-term stable conditions, whether they are dispensed monthly or less frequently. Reduce incentive for pharmacists to dispense more often rather than less and carefully monitor "counselling" activities.

- Many patients are given **medications on a PRN basis** without a clear understanding of how the medication is being utilized. In the institutional setting periodic reviews of PRN medications should be made so that they should either be discontinued or implemented on an ongoing basis if indicated as such.

Action: PRN order should have time limitation for reassessment, i.e. three months in a long-term setting.

- Physicians prescribing profiles cannot be evaluated in such a way that persistent patterns of poor prescribing can be picked up for directing educational efforts.

Solution: The comprehensive computerization of the drug benefit program might include a way to evaluate physician prescribing profiles so that peer-directed educational efforts can be focused on practitioners who appear by their prescribing profile to require updating or information on drug therapy.

Action: Computer systems for provincial drug programs should have patient profile and monitoring and physician profile capabilities.

- New prescriptions may not be tolerated resulting in expensive **wasted drugs.**

Solution: Use samples to initiate a new potentially long-term therapy or prescribe small amounts of drugs initially.

Action: Consider two-part prescription with special fee structure for new prescriptions -- i.e. one week's supply with a three-week supplement at smaller fee, if tolerated and continued.

- **Drugs which are discontinued** may accumulate in a household and may pose a danger to the patient or other household members.

Solution: A means of identifying unused or discontinued drugs may be developed with a formal disposal system through registered pharmacies or municipalities.

Action: Patients must be reminded by physicians, pharmacists and other health care workers to bring in discontinued drugs to the office, pharmacy or other designated site for disposal.

- The use of **psychoactive drugs** in the elderly, especially benzodiazepines, should be discouraged.

Solution: Physician and patient education programs directed to problems and dangers of benzodiazepines should be developed. Education in stress management and sleep hygiene should also be developed so as to avoid the use for these purposes of benzodiazepines.

Action: A method of putting impediments in the path of benzodizapine prescribing should be considered. Physician prescribing profiles through a computerized system may help identify physicians whose prescribing patterns suggests a need for education. Consideration to putting benzodiazepines on a "limited use" formulary category should also be considered.

C. RATIONAL DRUG USE: THE ROLE OF PHARMACISTS

-- Dr. Ruby Grymonpre

1. Promoting rational drug use: the role of the pharmacist

The objective of my talk today is to present my views on the role of the pharmacist with particular emphasis on the responsibilities of the pharmacist in promoting rational drug use in the elderly. A traditional, yet important responsibility of the pharmacist is drug distribution. The pharmacist must ensure that the patient receives the right drug, at the right dose and quantity and that the drug is given to the right patient. Compounding is also an important component of drug distribution, although this function is becoming a less prominent responsibility of the pharmacist and a growing responsibility of the pharmaceutical industry.

Generally, pharmacy practice is becoming less "product-oriented" and more "clinically-oriented." The pharmacist's clinical responsibilities are numerous and I would like to present this aspect of pharmacy in greater detail. The pharmacist must ensure that the patient has optimal drug taking behaviour, that is, that the patient adheres to the drug regimen prescribed. To do this, the pharmacist can make a variety of interventions. The pharmacist should review all medications and assess whether or not the number of drugs prescribed can be reduced. The pharmacist may identify drugs which are no longer required or she/he may identify drug duplication. A reduction in the number of drugs prescribed simplifies the drug regimen and improves patient compliance. Reducing the frequency of doses throughout the day has also improved drug taking behaviour. Many therapeutic agents have been shown to be equally effective if prescribed once or twice daily (if tolerated) when they were initially prescribed three or four times daily. Other agents are available in a prolonged release formulation to reduce the frequency of dosing. The pharmacist can also make a significant impact on compliance by developing a medication reminder system, individualized to the patient's needs. They can do this by tailoring the dosing schedule to the patient's daily activities, providing feedback or incentives such as blood pressure or blood glucose monitoring, or simply providing positive reinforcement such as a pat on the back when medications are taken as prescribed. Lastly, the pharmacist has the responsibility to educate the patient. Although knowledge improves drug taking behaviour, it does not necessarily ensure compliance. However, the patient has a need to know and a right to know certain things about the drugs they consume. The pharmacist should ensure that the patient understands the name of the drug, the purpose, how to take the drug and what unwanted effects may occur. Of course the amount of information you present to the patient at initial consultation will depend upon the patient's ability to comprehend what you are saying. Written information is also a useful tool which may supplement what you are telling the patient. However, it should not be used as a means to replace verbal communication with the patient.

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A third responsibility of the pharmacist is monitoring drug therapy. The objectives of drug therapy monitoring are:

1. To ensure maximum accuracy of the drug regimen.

2. To minimize toxicity of the drug regimen.

To appropriately monitor drug therapy, the pharmacist requires a patient medication profile. Based on our discussions yesterday, I understand the pharmacist in British Columbia is utilized as a reliable resource to provide information on which prescription drugs a particular patient has been prescribed. This is only one of the important functions of the patient medication profile. Also contained in the profile is a complete documentation of the patient's medical and medication history, including conditions, allergies and sensitivities to medications. The pharmacist should use the profile to develop a therapeutic plan which involves assessing current therapy for ongoing efficacy and need and adverse drug effects. Many drug-related problems which may be identified are primarily theoretical, however, especially if the patient is symptomatic, certain problems require intervention and should be communicated with the physician.

A final "clinical" responsibility of the pharmacists is a drug information resource to the patient for their individual needs and to other health care professionals such as the nurse and the physician. The pharmacist is the most knowledgeable health care professional in the area of both prescription and non-prescription drugs and he/she should be consulted more frequently in these areas. The pharmacist is in the unique position to make the most comprehensive recommendations on non-prescription drugs as they have a complete record of all medications the patient is taking.

In summary, I have outlined what I see as the primary functions or responsibilities of the pharmacist:

1. Drug distribution.
2. Ensuring adherence to the drug regimen.
3. Maintaining a patient medication profile and using the profile to monitor drug therapy.
4. Drug information.

If a pharmacist could perform these functions, she/he would make a significant impact on drug use in the elderly. However, currently there are several obstacles that our profession is facing. A constraint common to all disciplines in geriatrics is time and time equates to money. Pharmacists need to be compensated for the services they provide. It takes more time in geriatrics, time to take a history, time to do an assessment and time to counsel older adults. Who should be responsible for payment also needs to be decided, but health care professionals in geriatrics require remuneration for their services.

Lack of knowledge is a second obstacle. Pharmacists require a greater knowledge base in geriatrics. They require skills in communicating with the elderly, counselling skills, skills in developing patient medication profiles and utilizing the profiles to optimize drug therapy in this age group. Pharmacists also require knowledge in geriatric pharmacology and therapeutics. A recent article published in the Canadian Pharmaceutical Journal suggested that training in geriatric pharmacy at both the undergraduate and continuing education levels are deficient in most Canadian provinces. The United States appears to be more advanced in this area and maybe our American guests would like to comment on geriatric pharmacy education in the United States. A recent concept in the United States is the development of Geriatric Education Centres which appear to focus on multi-disciplinary geriatric education.

A lack of physician knowledge is also an obstacle to pharmacy practice. Firstly, the physician must realize that in geriatrics he/she is not the sole care provider for the patient. Rather, the physician is the coordinator of his/her patient's care. Maintaining health in old age requires an appreciation of behavioural, social as well as medical needs, and geriatric medicine requires a multi-disciplinary approach. The nurse, pharmacist, nutritionist, social worker, physiotherapist and the occupational therapist all have an important contribution to make in optimizing the health of their geriatric patients. Secondly, the physician needs to be educated about a pharmacist's capabilities. Pharmacists' must promote their expertise in drug information, maintaining patient profiles and making recommendations to optimize drug therapy and educating the patient about the medications prescribed to them.

The lack of patient knowledge is another obstacle to pharmacy practice. Patients need to be educated to take responsibility for their own health. They must learn to be more knowledgeable patients and more critical consumers. We must communicate to the older cohort that pharmacists are no longer only chemists; today's pharmacist is the drug expert who can provide helpful and practical advice about the drugs they are taking.

Another obstacle facing pharmacy practice is the communication gap that exists between the physician and the pharmacist and the patient and the pharmacist. This was mentioned briefly during yesterday's sessions, however, I would like to mention it once again. In my personal practice I can identify two common consequences of the poor communication between the physician and the pharmacist. Benzodiazepines are commonly prescribed in the hospital for insomnia secondary to an uncomfortable environment at night or the illness causing hospitalization. The sedative/hypnotic is prescribed at discharge and one year post discharge the patient is still taking benzodiazepine. The pharmacist continues to refill the prescription without questioning ongoing need and the physician repeatedly authorizes the refills without an assessment. A second consequence of the communication gap between the physician and pharmacist is the inability of the pharmacist to relay to the patient why she/he is taking the medication. It is important for the patient to understand why she/he is taking the medication for obvious reasons of compliance and an ability to assess whether the drug is in fact working. However, the drugs of today invariably have more than one indication and most often the pharmacist has insufficient information to communicate to the patient why the drug was prescribed.

The communication gap between the patient and the pharmacist is also a major obstacle. Patients report pharmacists never offer information and pharmacists report patients never inquire about the drugs they take. This communication gap is likely secondary to a variety of reasons and these reasons should be identified and addressed.

A final obstacle to clinical pharmacy I would like to present is the lack of a knowledge base in geriatric pharmacy due to insufficient research. As a consequence, many therapeutic recommendations made at this time are based on a trial and error approach. There is a need for more research to further our understanding of geriatric pharmacology and pharmacokinetics and to provide some prescribing guidelines. Research is also needed to identify and develop strategies to improve drug taking behaviour in the elderly and to determine how these strategies impact on health care costs.

In Manitoba we are attempting to address some of the issues I have presented. We have recently offered a continuing education program for practising pharmacists. The objectives of the course were:

1. To update pharmacist's knowledge.
2. To improve pharmacist's skills in drug therapy monitoring, communication and inservice presentation.
3. To sensitize the pharmacist to the social, as well as the pharmacological needs of the elderly.
4. To increase the pharmacist's interprofessional skills.

A secondary objective of the course was to outreach the education program to the more isolated pharmacists in rural settings. The primary vehicle for the educational program therefore, was video tapes, supplemented with preliminary readings and detailed lecture outlines.

Details of the course are available by contacting myself or Dr. Mark Novak at the University of Manitoba. Briefly, the course consisted of a 30-hour lecture session and a 15-hour practicum. A typical session lasted 2-1/2 hours with the first hour involving a video lecture, a 15-minute coffee break and a 1-1/4-hour case studies review and discussion session. Our required text was the American Association of the College of Pharmacy text: "Pharmacy Practice for the Geriatric Patient." Due to certain deficiencies in this text pertinent to the needs of our course, we found it necessary to supplement the readings from the text with further references from the literature. Through a quasi-experimental control design test we were able to demonstrate that students taking our course increased their knowledge base in geriatric pharmacy. Our video-taped lectures were presented primarily be geriatricians and in general, it was found that insufficient emphasis was placed on pharmacy-related issues. It became apparent that to produce video tapes of high quality, a much higher budget would be required.

In Winnipeg, we are also in the planning stages of the Lions Place for Health. The overall mission of the Lions Place for Health is to promote and maintain health in the elderly. The Place for Health will provide primary health care services, including screening, diagnosis and medication review, preventive services such as promotion of positive lifestyles, self-help and independence, and a focal point for joint education and research endeavours. The Place for Health will be multi-disciplinary, including dentistry (which is the most popular discipline), medicine, nursing, pharmacy, nutrition, physiotherapy, audiology and occupational pharmacy.

One of my research interests is in the area of prescription drug dependency and in Manitoba we are currently trying to develop a drug screening questionnaire to quickly "tag" older adults who may be chemically dependent. Similar to Derek Daws and Doug Danforth, we too are evaluating prescribing patterns using the Pharmacare data available in Manitoba. I hope we will have had an opportunity to collaborate once the data have been analyzed. Other research areas include pharmacokinetic studies and an evaluation of the MILE.

D. RATIONAL DRUG USE: THE ROLE OF NURSES

-- Mr. Morrie Steele

The Ministry of Health is to be commended on this initiative of holding an "Invitational Workshop on Medication Use and Elderly People." The Registered Nurses Association of British Columbia is pleased to participate in this workshop and to be able to present a perspective on the registered nurses role in both consumer education and continuing professional education.

In keeping with the structure of this workshop, my presentation will address the two key issues under separate headings, although this division is somewhat artificial due to the overlapping nature of the content areas.

1. Consumer education

Consumer education will be dealt with under hospital residential care and community-based care.

The two previous speakers, Dr. Gordon and Dr. Grymonpre both put up overheads that showed three relationships -- the physician, the client and the pharmacist. During the next 25 minutes I am going to tell you about the missing link in the equation, registered nurses.

Registered nurses continue to be the health care professionals who provide 24-hour a day, 7 day a week professional nursing care to clients in hospital/residential care settings. Consequently, registered nurses are often the most accessible professional caregiver to the lay person, although this may occur indirectly through a care aide. In functioning in a collaborative role with the physician, pharmacist and other professionals, registered nurses frequently receive questions from clients and their significant others regarding medications that have been prescribed. Nurses reinforce the therapeutic value of a drug and explain the side effects and untoward effects to clients and to their significant others. Nurses, as part of their role, provide information and assist clients/residents with medication regimes and all other aspects of their daily activities.

Often, individuals who reside in long term care facilities are not able to identify and talk about the effects of medications. Medications are adjusted based on nursing assessment, without contemporaneous medical assessment of the client. Nurses frequently assume the role of educator in helping clients to identify changes in symptoms and the effects of drugs on them. Furthermore, nurses assist clients to identify symptoms about which they should be consulting their physician.

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Many problems that nurses identify are dealt with over the telephone with physicians. Nurses often find themselves in a situation where they make suggestions to physicians regarding the need for medications to assist in managing pain, sleep difficulties, disturbed behaviour and other issues. Many excellent nurses make it their business to promote alternate ways to manage pain and sleep difficulties. At times, nurses encounter resistance from physicians regarding suggestions that they make for medication management, and yet often, nurses have an accurate picture of the problems that the client is experiencing.

In the community, community health nurses, home care nurses and long term care assessors are often the only professionals who assess clients in their home environment. Much of their responsibility is in screening and referral. In performing that role, nurses have an opportunity to educate clients. The complexity of medication regimes and the elderly is compounded for nurses who work in the community. Frequently, the nurse is the only professional who can ask the client to show her/him all of the prescription drugs that have been prescribed and to identify other drugs the client is taking (OTC's). Alcohol use can also be assessed. Nurses are often able to help the client "weed out" outdated medications and unnecessary and potentially harmful medication supplies. Because the elderly have access to any pharmacy they choose, it is often difficult for one pharmacist to maintain an accurate drug profile. Nurses recommend to clients that they deal with one pharmacist only, and encourage clients to talk with their physicians.

Nurses who practice in the community can often improve client compliance to medication regimes through education. Nurses frequently encounter clients who do not take the drugs that have been prescribed because they either do not understand the directions for taking them or they do not feel that they require the drugs in the dose or frequency that has been prescribed. Literature on chronic illness and compliance has pointed out that individuals with a chronic illness have difficulty with taking prescribed medications for prolonged time periods. Home care nurses in British Columbia have concerns about clients who do not finish a drug before the prescribed time, save what is left and then take them at a later time. Nurses can educate clients to help them better make decisions.

Nurses in community settings also have the opportunity to contribute to family education. The nurse is frequently the conduit of knowledge between families, clients and other health professionals (physicians). Skilled nurses are able to capitalize on family resourcefulness. Nurses are able to assess family information needs and to assist families in being creative and resourceful by educating them about alternate ways to deal with difficulties such as sleep problems. Much of the education involves assessing knowledge of prescribed and OTC drugs, their desired effects, interactions, side effects ad untoward effects. Teaching and reinforcement are ongoing processes which the nurse is alert to and can accomplish, during one-to-one interactions and telephone contact.

Nurses act as advocates for clients and their families. We help clients negotiate the health care system in striving for rational drug use. Rational drug use is only one aspect of advocacy. Another is rational non-drug use. For example, educating about ways to reduce environmental stimulation may assist the client/or family to reduce consumption of drugs to assist in sleep. Educating about the alternatives to medication in pain management reduces the use of analgesics. The nursing goal in client teaching is often reduction in drug use and in drug interactions. Nurses try to help families assume a holistic perspective towards health and management of chronic illness.

The Registered Nurses Association of British Columbia is currently engaged in working with a number of communities in British Columbia as part of the "Healthy Communities Initiative." The RNABC Board of Directors has provided a budget item for 1989 for the Association to work closely with several communities in examining the health concerns of local importance. Part of this process will be to encourage communities to develop health profiles or assessments of their community. Part of community assessment might well include identification of availability of, and access to, drugs in the community at large. Part of the nursing role is educating local communities about assessment of community needs and the health profile of the community. In taking on this project, RNABC is trying to promote primary health care and primary health care policies. This includes identifying appropriate technologies considered important by the community and drugs are included in that technology. RNABC is keen to see development of appropriate technology and this is an advocacy role that RNABC views as part of community education.

2. Continuing professional education

Several initiatives are being undertaken in identifying basic educational and continuing professional educational needs for nurses.

a) The RNABC Board of Directors has struck a task committee to review the content of the basic nursing programs preparatory to nurse registration in British Columbia. One of the tasks of the committee is to identify the current curriculum content in gerontology in basic programs and to make recommendations based on the findings. The delegates to the 1988 Annual General Meeting passed a Resolution to support this initiative because specialized knowledge is required to care for the elderly. There are many individual nurses in British Columbia who have a strong belief that all preparatory programs should have much more content related to all aspects of the elderly and management of their health care needs.

b) Several facilities in the Greater Vancouver Regional District and in the Capital Regional District have created Clinical Nurse Specialist positions. The incumbents in these positions hold Masters degrees with a specialty in gerontology. This is an exciting move because these facilities have recognized that the care of the elderly requires special knowledge and skills and have committed themselves to providing this resource to staff and residents.

Clinical Nurse Specialists, through their consultative role, are able to assess the learning needs of clients and staff and are in an ideal position to role model the kind of nursing care that is required by residents in long term care. Clinical Nurse Specialists provide educational sessions on clinical assessment skills, physiological and psychosocial changes that occur with aging and elderly clients' responses to medications.

They also provide consultation to care aides in facilities to provide structure to promote efficient and effective care and strong leadership for the care aides.

c) However, other facilities such as intermediate care and personal care settings are not as fortunate. The Community Care Facility Act -- Adult Regulations Section 8 states:

> "(3) The residents' medications shall be
>
> (c) Administered at the time and in the prescribed dosage by an adult member of the staff who can identify the resident with certainty and who shall remain with the resident until the medication has been taken."

In many facilities, non-professionals administer medications. The RNABC's position on this issue is that "only licensed health care personnel have the requisite knowledge and skill to administer medications." In 1984, the RNABC President, on direction from the Board of Directors, wrote to the Minister of Health regarding this issue. Excerpts from that letter follow:

> "Sophisticated pharmacological intervention is required to handle the more acute symptomotology of the long term care resident. Assessing whether or not a medication should be withheld, observing what effect medication has had on existing symptomatology, and observing for adverse drug reactions are a necessary part of medication administration. Assigning lay personnel (who have no formal training in pharmacology and are lacking a broad nursing knowledge base) to administer medications is inconsistent with their preparation and competence and cannot ensure resident's safety."

The Minister of Health's response was:

> "Although I understand your concern for the safety of residents, I am satisfied that the current regulations provide for and protect the health care of these residents, including administration of their medications."

This is an area about which the RNABC Board of Directors has ongoing concern. The Ministry is currently reviewing the Community Care Facilities Act and the Adult Regulations. An RNABC ad hoc committee has been struck to review the Act and the Adult Care Regulations. The committee's work will be completed by mid-

March 1989 and will make recommendations, through RNABC's Executive Committee, to the Adult Licensing Board.

The issues around medication administration to the elderly will continue. Policy makers require education about the significance of medication administration and the need for a higher ratio of registered nurses in long term care to provide quality care, problem-solving, mentoring and support for care aides in providing the care that the elderly deserve.

Registered nurses are able to problem-solve creatively to promote therapeutic environments. Nurses understand people's patterns and are able to use those normal, natural patterns to provide individualized care, even within the confines of an institutional environment. Registered nurses are able to promote new habits, both for residents and for non-professional caregivers. Registered nurses recognize that more programming is required to provide diversional activities for those whose home is a long term care setting or a residential care facility. Those with chronic illness have difficulty using leisure time constructively. Perhaps, just perhaps, if more structured environments were in place, medications would not be the first choice for assisting clients/residents in managing their behaviours.

Registered nurses provide a leadership role in a large number of facilities. But often, because of budget constraints and resulting staffing patterns, the burden of medication administration and carrying out treatments becomes the nurse's responsibility which eventually leads to skill atrophy in other crucial aspects of client care.

d) The Medication Safety and Advisory Committee provides another way to promote continuing professional education. A structured review of each client's drug profile by the pharmacist, the physician and the registered nurse often leads to a re-assessment of those drugs that are currently in use and to a reduction in number of drugs and frequency of administration. A team working together can increase the skills of each of the team members and can promote a thoughtful and meaningful review of medications, although the quality of the medication profile review depends on the knowledge of the participants.

Interdisciplinary clinical conferences are another way in which assessment of the prescribed medications, and evaluation of the client's responses, can assist in rational drug use. Consumers should be included in these conferences.

e) RNABC was represented on the Long Term Care Subcommittee of the College of Pharmacists to discuss "standing or nurse initiated orders." In March 1988, agreement was reached between the RNABC representatives on the Committee and the College of Pharmacists that nurse initiated orders will be:

- Individualized.
- Only for non-prescription drugs.
- Signed and dated annually.

- Kept on each client/resident's chart.
- Administered only by a registered nurse.

Institutional policies can support knowledgeable decision making regarding "nurse initiated" orders.

f) RNABC currently is represented on an ad hoc committee, the "Pharmacy Advisory Committee," that has representation from a number of organizations and associations who are concerned about the whole area of medication administration in long term care facilities. There is representation from RNABC, Pharmacare, BCMA, the College of Pharmacists, B.C. Pharmacists' Society, B.C. Long Term Care Association, B.C. Pricare and Directors of Resident Care. Issues that have been discussed include administration of medications (and the category of worker), documentation, verbal and telephone orders, contingency medications, standing orders and others.

g) RNABC's Nursing Practice Consultation Service is available to all RNABC members in British Columbia and promotes a collegial consultation among nurses. In 1988, Consultants provided 1,600 telephone consultations to members and did educational sessions for an additional 1,500 members. Medication administration in long term care accounts for a fair number of those consultations. It is through this service that nursing consultants are able to offer advice to Registered Nurses on ways to improve the systems that they are working with in their facilities. The service frequency refers callers to experts in long term care settings to discuss strategies that have been found to be effective in other settings.

3. Summary

RNABC is optimistic that this initiative will provide direction for consumer education and awareness and continuing professional education.

a) In the community, clients and their families require innovative programs to promote rational drug use.

b) An interdisciplinary approach to community based care is critical to maintaining the elderly in their home environment.

c) Consumer education is required on a large scale -- through the media, community centers, seniors groups, physicians offices, pharmacies, shopping areas, etc.

d) Wellness and health promotion should be a focus in community based programs.

e) Professional staffing ratios should be increased in health care facilities.

f) Increased collaboration among the interdisciplinary team needs to occur, both in institutional settings and the community in reviewing drug profiles. I am extremely fortunate in my role as a Nursing Practice Consultant with the wealth of resources that are available to me, such as networking possibilities with the College of Pharmacists, Pharmacare, College of Physicians and Surgeons, B.C.L.C.T.A., H.S.A.B.C., and others.

g) Consumer participation and input must be sought for all initiatives.

h) More forums like this one need to be planned.

E. IMPLEMENTATION AND DELIVERY OF PROGRAMS
-- Mr. Robert Bachman

I want to talk first of all about baseball. Imagine this orange is a baseball. When I was a young boy, I really wanted to get close to my father, who is now 80. He was a lot older than me, and he was tired of having children. I was the youngest. So, he would sit on weekends and watch baseball on a black and white television set.

Now I was about five and wanted attention. So I watched the pitchers and I finally got the body movements down. I would look to the left and look to the right, and I would wind up and I would pitch, usually right in front of the T.V. to block his view of the game. But he was appreciative because I was learning to love baseball. However, once he realized that I had learned to love baseball, he wanted to give me an eternal lesson. He said, "You know Bob, the wind up is okay, the body movements are great and it's always very interesting to see how much the pitcher moves, but," he said, "it's the pitch that counts. Is it over the plate? Does the hitter miss the ball? Is it a hit that can be fielded?" I remembered that lesson -- that it's the pitch not the wind up that counts, and I want to relate that to you this morning.

In August 1987, my organization, the National Council on Patient Information and Education, was ready to make our pitch. We had done the wind up. We had researched the problem of medication misuse by older Americans. We had prepared the report that each of you received, "Priorities and Approaches for Prescription Medicine Use by Older Americans." We were ready with our pitch, our "Before You Take It, Talk About It" campaign directed at the public, physicians, pharmacists and nurses. We had figured out our media messages. We were going to go to our older patients and their caregivers and the health care professions, but we had some obligations. We had received $75,000 from the Commonwealth Fund to research the issue, prepare the report, test the materials and then we received another $203,000 from the Retirement Research Foundation in Illinois. In return, we not only promised to have a good program, but we said we would hold a press conference in Washington, D.C. That was a lot easier to type in the proposal than it was to actually make happen. We said we'd get the Assistant Secretary of Health, as well as the Commissioner of the Food and Drug Administration and we would get our Chairman, Former Congressman Paul Rogers. I was only sure we could get our Chairman.

We wanted to get visibility for the problem; we wanted to get visibility for our new report and we wanted to get visibility for the new program we were going to launch. But as all of your know, in Ottawa and Washington, D.C., there are press conferences and new problems and new reports every day. They tell you what they are going to do about it and it never gets in the paper. So we were trying to figure out how we were going to get the papers to this program.

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We were really angry because all that the papers reported was drug abuse: crack, cocaine, crack houses, and people dying. We wondered how we were going to get into the news. All they're concerned about is drug abuse and we want to talk about drug misuse. Our P.R. firm said it's not sexy! We said that this is all we have.

We listened to our P.R. firm for a while and we decided to go ahead and tie our issue to what the press is already talking about. So we said that medication misuse was the nation's "other" drug problem. We said that the misuse of **legal** medicines, legally prescribed and legally dispensed, was a threat to the health and the independence and even the lives of older Americans. We said we had a report, and that we had a program prepared to deal with the problem -- and we crossed our fingers.

We were lucky, the press had worn out the drug abuse issue, at least for that week. So in they came to our press conference. We talked to them -- out they went and wrote stories. Here is the headline in the Washington Post: "Drug Abuse Project to be Aimed at the Elderly" (that was the primary caption). Another headline said, "Prescribed Medicines Misuse" in smaller type. But we got what we wanted -- we wanted press attention for our program. Why? Because press attention in our country affords credibility. If you get in the newspapers, then what you are doing is important. If you get in the newspapers you can then xerox the articles and send them out to important donors, important pharmacists, important nurses, and government officials. You can say, "Please pay attention to our issue," and people say, "Wow, it's in the papers, it's got to be important."

The media attention is also important in terms of reaching your target audiences because older people -- all people -- read the newspapers. What they see in the newspapers opens their minds to new ideas. We wanted to open the minds of the public, open the minds of the health professions, and open the minds of the health organizations to the fact that we needed to address this problem. Now, I won't suggest that Canada has a drug problem too, but it wasn't a bad device.

This morning I want to tell you about our program to reduce medication misuse by seniors. I want to talk about how it was implemented, how it was delivered. What I really want to talk about is how it was marketed because as soon as you came to this conference, you changed -- you put on a new hat. You had to knock off the one you were wearing. You are now marketers and that is not a bad term. Don't think of yourself as marketing automobiles, think of yourselves as marketing a social idea that is going to help the health of all Canadians. That is what we are talking about today, social marketing.

In our report, we prioritized the factors contributing to medication misuse and we decided that our campaign would focus on poor communication. There is a communications gap between health providers and older consumers. We then tested the validity of these factors. By going out to a focus group of older persons: male, female, white, black -- we said, "What do you think about your medicines? What do you think about your doctors? What do you think about your pharmacists? What do you think about your nurses?" And then we listened a little bit. They told us that the communication was poor. They weren't asking any questions; they admitted it. Only 6% of patients in the United States asked questions about their prescription medicines. They also reported that they were dissatisfied with what their doctors were telling them. They were dissatisfied with what their pharmacists were telling them. They were dissatisfied with what they were not being told. They weren't sure how to take it. They weren't sure when to take it. They weren't sure about side effects.

So we felt confident that poor communication was indeed common. However, they also told us something we hadn't thought about. They had a real nostalgia for the family physician who really cared about them when they were growing up. He even came to the house on call. They had a nostalgia for the corner druggist who would take care of the family and knew everybody by name.

So we looked at the idea of nostalgia and realized that 28 million elderly Americans had very powerful images of their past and those images were influencing the way they look at the present and we decided to take advantage of it. Now we admitted that nostalgic reflections of the past were not necessarily accurate, and we couldn't say they were factual, but you had to admit that they provide a powerful motivation and we thought maybe it would be a good motivator in the present. So we commissioned an artist to paint a picture that communicated the caring practitioner discussing medicines and that was to become the image in the logo of our campaign. Now this picture is a fake; it is not an original Norman Rockwell. I have had doctors all over the country writing to ask me for that Norman Rockwell print. We also decided to use catchy phrases like, "Reintroducing the oldest advance in medicines." A new drug? No. Talking, communicating, speaking up. Yes. We also wanted to be directive: "Before you take it -- talk about it." We wanted to give permission that it is o.k. to talk about your medicine. You can't talk about the weather and don't bother talking about your nieces and nephews, but talking about your medicines is o.k. We were committed to our approach and so we hired a public relations firm in Washington, D.C. to prepare a 30-second television ad illustrating the benefits of the doctor and patients communicating about the medicine; illustrating the benefits of the pharmacist and patients talking about the medicine.

We have an excellent television spot. We wanted to have something to compete with all the other messages out there that reach older consumers. Even though they are concerned about their medicine, they are concerned about other things too. If you want to get their attention, you have go make a McDonald's ad. You have to pop into their living rooms on T.V., pop into their ears on the radio, let them see or hear a notion that jumps out and grabs them. Everybody else is out there competing in a marketing context.

We decided that we would do the distribution ourselves because we wanted to get to know the people who were asking for the spot. We went out to 900 commercial television stations in the United States. We sent them the story board and a letter saying that they could order this spot for free in a format that would fit their machines. We weren't going to give it to them free -- they had to order it. This was an unusual approach. Usually, public service announcements were sent out in the mail to the stations and you hope that somebody plays them. We also decided to tease them a little bit. If they ordered the spot, they would get a free copy of a book called **About Your Medicines**. It is 400 pages long and it listed all the drugs in the United States. Our idea here was that they could get this book and a sense of how many medicines there are in the United States that people have to manage. They had no idea what we meant when we said medication misuse, but if they got this book that they could take home and use with their families, then they might pay attention to the problem and play our TV spot. So if they ordered the ad, they got the book.

We did pretty well. Over 450 stations ordered the television spot from us out of 900. There is not a P.R. company in Washington, D.C. that can say they get those kinds of results. The way we got it was we went it out once, asked them to order the spot, then we went back out again to the stations and said, "You guys are missing the boat, all your buddies have ordered a spot." We told them everyone in the country ordered a spot. They got competitive and came back and ordered a spot. The message is that you you are trying hard to succeed, that you are trying to get your product out. So, 450 ordered the spot, 83% ran the spot and 73% agreed to run it a second year.

In addition, we had made friends with executives at CBS, NBC and ABC. We invited them to be a part of the planning. Later, we went back to them to ask them to run it on their networks. CBS ran the ads 207 times a year (over 202 stations that are part of CBS); 207 times is a lot, almost every other day. They were running on CBS during NFL games, during the morning news, midday news, evening news, and we were getting all this for free. So there is really no magic to public service advertising, except to have good materials, a persuasive approach to the stations, and the ability to engage in long-term repetitive follow-up phone calls and letters. Let's face it, you are begging, "Please play, please play." You don't want to hire anyone to do that because it costs too much money.

With radio it was a different story. We produced a 30-second nostalgic radio ad, put it in an attractive box, and sent it out to only 1,000 stations in the United States. There are 12,000 and we only went for 1,000. We only went to the radio stations that had formats that appeal to older people -- all news, talk radio, classical music, middle of the road -- and again we told them about the nation's "other" drug problem. We said, "Please, you have to play this stuff."

At first, we had only a few that were going to play it. So we went back to our "Before You Take It, Talk About It" button and we asked, "We want you to wear this button, but you can't wear the button unless you run the spot on your radio station." You know, we were just bugging them so more of them would run the spot. When we looked at the bounce back cards from the radio stations, we found out a lot of radio stations wanted to have their own local voice on the air. They wanted listener recognition. They didn't want a tape of a New York voice and nice background music. So we thought about that and we wrote scripts -- 60, 30 and 10--second scripts -- and we sent them all back to the 1,000 stations and said, "How about just reading the scripts?" Well, we picked up 300 more stations by just sending them out a couple of pieces of paper. We went to the radio networks and Mutual Broadcasting System ran the spot for 90 days on their 3,000 radio stations nationwide. That is a long public service announcement run for a network. Usually, they wouldn't run it for a year unless your wife or husband worked for the radio station. It would have cost thousands and thousands of dollars to buy the time.

Now radio and T.V. ads are only one of the arrows you put in your quiver. There is more that can be done. We prepared a print ad directed at the major consumer, general interest health and senior citizen magazines. Again, personal letters were used. We got lists of editors of these magazines by name. We sent out these letters to the editors and we told them about the "other" drug problem. We said, we need your help on this problem, would you please run this spot? We telephoned and said, "Have you got the letter, can you run the spot?" If they said yes, we said,"Well, what size spot do you want?" We wanted to make sure we gave them what they wanted. Now here again, success requires preparing good material and then following up with persistent marketing. We offered a variety of sizes -- full page, half page, one-third page, one-sixth page -- we would have done anything. If they wanted a triangle we would have done that, but even offering those custom sizes was not enough. **Time** and **Newsweek** said that they don't take slicks, but they do take negatives. They're both big publications and use negatives, so we went ahead and made negatives.

We said, "What size you do you want? What do you want them to look like?" We made the negatives and we sent them back so they didn't have to do any work at all, but run them. The payoff is that **Newsweek** has been running our spot, **People Magazine** has run the spot, **U.S. News and World Report** has run the spot, **Time** has run the spot, **American Health** has run the spot, **Reader's Digest** is getting ready to run the spot, and **Modern Maturity** is going to run our ad in an issue that will reach 19 million older consumers. They didn't like our Normal Rockwell picture, so we created a new design for them and that is what is going to go in their magazine.

We also placed public service advertisements in the shoppers magazines and the small town newspapers. These papers are dying for articles. They don't have the staff to write them; they are starved, and they also know something that the big papers know -- health sells. You put a health ad in and people love it. They will read about any health issue -- don't ask me why, but the appetite is huge. So we contracted to have four of these ads in shopper magazines around the United States and we did pretty well. 1,100 articles have appeared so far that have reached approximately 7 million readers and we expect when all are done we will have reached maybe 10 million. I think our total investment, including analysis was $7,000 for that placement.

We went beyond just going to the consumers because they are only a part of this problem. We rearranged the ad a little and changed the topic. Instead of "reintroducing the oldest advancement in medicine," we went out to the physicians and pharmacists and nurses and said, "Reintroduce the oldest advance in medicine!" What was it? -- Talk. Our direction was different -- "Before they take it (your patients take it), talk about it!" Again the approach was the same. We went out to the editors of 273 physician, pharmacy, nursing and general health magazines asking them to please run this ad, please help with the nation's "other" drug problem. We sent them three different sizes. We sent them a button and then we called them to find out if they were going to place the ad. We hyped them a little. We said, "Don't let J.A.M.A. beat you out." And it works! People are competitive. They think of who is doing what in their own field and so again, we had gratifying experiences with no magic. The following medical journals are running our ad: **The New England Journal of Medicine, Annals of Allergies, AMA News, R.N. Nursing, The Journal of Practical Nursing,** and **Modern Health Care.** Most of the major pharmacy organizations -- even at the state level -- have run some form of our ad. Now you might ask, "Why?" Well, one caring reason is the quality. It appeals to them; it looks good; they won't be embarrassed The health professional looks caring (the image they want for the profession) and they know that this is a problem. There is nothing in our area -- it isn't sanitized, although it is effective.

It didn't say anything that was going to make anyone mad and that takes a lot of know how to say something that is effective without making somebody mad. The final element of our campaign was to produce a marketing flyer that would be given to individual practitioners to activate them to participate in these campaigns. We produced a flyer that said, "Reintroduce the oldest advance in medicine." When you open it up it says that the oldest advance is **TALKING**. And talking can help solve the nation's other drug problems. And it says, "Call the provider for help." We needed their help and we asked for their help. We said we had materials that they could order and offered pictures of them. We made it very easy. There was an order form on the back and we didn't make it free.

One of the things that we have learned is that free means cheap. Free means low quality. Now don't ask me why. Not everywhere, but in certain circles, particularly providers, free is not the way to go.

We asked them to pay. If they wanted a counter card, they had to order it for $1.50. If they wanted brochures, they had to order 50 for $10.00. If they ordered quantities of those, we would give them discounts. If works! What is $10.00 if you know that you have a problem with some of your patients coming into your physician's office or your pharmacy. What is $10.00? They can afford $10.00. So we sent this flyer out to doctors, pharmacists, nurses, hospitals, clinics, nursing homes, retirement centers. What we are offering them is a counter card that they could put up in their pharmacy or their office that says that talking to your doctor isn't a thing of the past, it is the way of the future. We offer them a brochure that they can put on their brochure racks. Inside the brochure it says your doctor, pharmacist, and nurse need to know what drugs you are taking and about any problems you may have. Doctors, pharmacists, and nurses are not all beating down the door to find out the problems of older people who take medicines. If that was the case, we wouldn't be worried about the project. We are talking about the world as we are hoping to shape it. We are trying to persuade older people that it is okay to talk about medicines, that the providers want their questions.

And we did this research to back us up because while the FDA studies showed that only 6% of patients in the United States ask questions and while nearly 70% of consumers' providers report that they are not getting information that they want to know about how to use the medicines, there is no indication that the providers will not answer direct questions. So our objective is not only to encourage question asking, but to provide the tools. We have been urging older patients and the general public to talk about these five questions about your prescription medicines -- What is the name of the medicine? What is it supposed to do? How do I take it? When do I take it? and, How long do I take it? Are there any drugs, foods, beverages, OTC medicines or activities -- like going out in the sun or driving a car -- that I should avoid while I am on this medicine? Are there any side effects and what should I do if they occur? Finally, we urge them to ask if there is any written information about this medicine because there are voluntary leaflets in the United States that are drug specific and they can get them from the doctors' offices and the pharmacists. We also want them to deliver information and inform the provider about the medicines that they are already taking -- even non-prescription medicines -- and tell them if they are having any problems about their medications. And finally, patients should tell their caregivers if they have any allergies.

Now the last stage of our campaign is the marketing of the flyer. British Columbia is a big place; the United States is a big place. The device we have used to try to reach all the people we want to reach is to establish an intermediary network of people to help us reach the provider and help us reach the public. We have physician groups, pharmacy groups, nursing groups, manufacturers, consumers and voluntary health organizations -- all 240 members of our council. We have gone to them and said, "Please, we will give you these materials free, but we need you to introduce them to the leaders in your network and ask if they would begin this campaign." For example, we went to Ron Ziegler, President of the National Association of Chain Drug Stores and a member of our council. We asked, "Will you please go out to the 300 CEOs of chains in the United States and go to the chief pharmacist and ask them to consider these materials and consider placing them in all the drugs stores in the United States?"

Out went the letter. We do not have the credibility necessary to influence drug stores, but Ron Ziegler does. He is the President of the organization. We went to the American Association of Homes for the Aging and said, "Will you please send these materials to the directors of your nursing homes? We will provide the material. We will pay the label costs. We will mail them for you, but you write the letter." They wrote the letter and out it went. We are getting significant orders from nursing homes.

There is a lot of magic with this, the magic is hard work. You have to go out and find out who has the keys to the kingdom you want to reach. For example, who knows how to reach chain drugs, who knows how to reach pharmacies, who knows how to reach physicians in all of the colleges, in all their sub-specialties, in the town where you want to get? Essentially, your resources are like water in a pitcher and you pour it into every intermediary network that you can find and then you push a little and get them to get it down to the regional level, get it down to the state level, get it down to the local community level, where it will finally reach all the providers. That is what we have done and that is what we are still doing. We have a long way to go. We have really just begun. And we began planning this four years ago.

Dr. Lamy can tell you he began his process, obviously more than 14 years ago. It is an ongoing long journey. We are on the verge of breaking through. Let's work together and realize we can do it. It just takes persistent, persistent, step-by-step work. Remember, it is the pitch that counts. You can make the wind up, but the real work is going to be the pitch and it is going to be a longer term pitch than you may have expected, but the payoffs will be phenomenal. Thank you very much.

F. PROFESSIONAL PROGRAM DISPLAYS AND VOTING

Having reviewed the professional program possibilities presented in poster format, delegates were given the opportunity to indicate their preferences. Using a sticker voting system, delegates were asked to select the five programs which they found most appealing from a feasibility and outcome point of view. The cumulative rating of the 19 programs displayed in poster format is presented below. Program outlines are provided in Appendix A.

Program ideas -- professional

Posters	Votes	Rank
Alternate Seniors Analgesic Program	14	6
Geriatric Pharmacy Practice Program	13	7
Consultant Pharmacists service in LTC	2	13
Drug Information Reference D.I.R.	7	9
Geriatric Therapeutics Companion to D.I.R.	26	1
Clinical Pharmacists Prescribing Drug Therapy in Geriatric Setting	0	-
Computerized "Smart" Card	21	4
The B.C. Drug and Poison Information Centre (D.P.I.C.)	8	8
Older Patients and You: Communication	0	-
Undergraduate/Post Graduate Medical Education	26	1
Medicating the Geriatric Patient	7	9
Manitoba Personal Care Home Prescribing Guide	4	11
Professional Reference Materials	1	15
Guidelines for the Use of Behaviour-Modifying Drugs	1	15
Drug Usage Review Program D.U.R.	23	3
Nurse Initiated Drug Reduction	3	12
Educational Videos	0	-
Before They Take It	16	5
Drug Information Services	6	10

G. PROFESSIONAL PROGRAMS: RECOMMENDATIONS FROM GROUPS

1. Group No. 1 -- physicians

This group offered the following program recommendations involving physicians.

a) Seniors medication awareness symbol

Essentially the same as symbol awareness programs discussed with reference to consumers, but here the focus is on involving physicians in the information dissemination and patient education aspects.

b) Expansion and refinement of the Pharmacare data base

Particularly to accomplish the following:

- Information on target drugs.
- Information to assist in the preparation of regional, educational and information seminars.
- Information for improved "brown bag" medical use review programs.
- Information for improved physician peer review programs on selected drug prescribing habits.
- Information to assist in the development of regional drug compendia.

2. Group No. 2 -- pharmacists

This group offered the following programs aimed at pharmacists.

a) Professional "flying squads"

Professional teams, organized geographically, which may involve the following professions:

- Physicians.
- Pharmacists.
- Nurses.
- Nutritionists.
- Therapists.
- Home support workers.

Through the team, professionals would work collaboratively to respond swiftly and effectively to a range of seniors' medication needs.

b) Inter-disciplinary exchange program

A work practicum in which a professional might attempt to step into "the shoes of another for a day" in order to experience the tasks and responsibilities, the pressures and problems, etc. of another professional in another discipline. The program would minimally consist of a pharmacist rotation plan aimed at providing pharmacists with expanded scope of practice experience, education opportunities and a broader base of information about medication problems and the elderly. A program spin-off benefit might be more extensive use of the drug use review program of Pharmacare among the health care inter-disciplinary professional team.

c) Elder patient adoption program

An older patient or couple is matched with a pharmacy student. The student would follow the case(s) for a period of up to two years to observe, record and report social and medical condition changes, medication incidents, compliance habits, drug actions and reactions, symptom control, etc. The student could develop a profile which would provide information for 1) analysis of the individual case involved, 2) educational purposes, and 3) providing case study data for research purposes.

d) "Elder-friendly" pharmacies

This program is built on the premise that many pharmacies need to improve the amenities they provide to elderly customers. These amenities, both professional and non-professional may include:

- Easy wheelchair access.
- Comfortable waiting areas while prescriptions be being filled.
- Medication consultation service.
- Prescription refill follow-up service.
- Ongoing drug profile development.
- Interaction and feedback information with and to other health care professionals involved in the patient's case.

3. Group No. 3 -- health systems

This group offered the following types of health system program possibilities.

a) Enhanced data base information -- both from B.C. Pharmacare and by health care facilities

Systems to produce medication use data, both provincially and locally, should be targeted to individual drugs and to individual patients. Such data bases could support and enhance improved education and information programs through printouts, video tapes, etc.

b) Physician/pharmacist interactive communication technology

Technology currently exists and should be expanded to enable physicians and pharmacists to communicate quickly with each other.

c) Long-term care medical review information systems

Envisioned as the development of an information system within long-term care facilities in the province. It would involve physicians, both in data input and in interaction with other care givers within the facilities and who relate to the facilities.

d) "Geriatric Companion" on drug information

Companion to the existing Drug Information Reference (DIR). This system-based compendium is intended to focus on "constellations" of symptoms of diseases and other conditions affecting the elderly. The system would include and provide pharmacological information on medications ordinarily used to deal with the general symptoms of conditions and diseases found in the elderly. It was suggested that such a compendium be made available in loose-leaf form initially, but that systems development be carried out to ultimately produce the compendium electronically. The electronic format could then be linked back to the suggested interactive communications systems between physicians and pharmacists and indeed, with other health care professions.

e) Smart card

A card containing a programmable computer chip capable of storing basic demographic data and of being encoded with specific data on a patient's condition and medication. It was recognized by the group that implementation of such a smart card at this time may be difficult, since the technology is still very new and use of such a card requires development of an appropriate system infrastructure.

f) Alternate seniors analgesic program

This involves development of an information data base on pain symptoms and causes among the elderly and appropriate medications, both prescription and over-the-counter that could be used to provide safe drug therapy at the least cost to the senior consumer. Non-pharmacologic approaches to pain conditions would be examined.

4. Group No. 4 -- nursing

This group offered the following programs targeted at the nursing profession.

a) Application of the *Drug Information Reference* (DIR) to nurses.

b) Examination of drug administration frequency

This program, probably most applicable in an institutional setting, is aimed at nurses to encourage their increased attention to medication taken by patients and its frequency of use, as compared with changing patient condition.

c) Regional nurse assistance squad

This program sees one or more nurses organized into an assistance group to help home support services through:

- Concentrating expert resources that can interact to assist in the delivery of services.
- Providing support and collective review of care plans by all care givers and by patient on a periodic basis, at least once per year.
- Increasing nurse-driven and nurse-led care ideas, including nurse-generated influence on medication decisions.

5. Group No. 5 -- general

This group proposed the following projects addressed to professionals generally:

a) Smart card (see above)

b) Physician attitude change

If professionals want people to talk to them -- as suggested by the "Before you Take It" promotional campaign -- they must be more clearly accessible.

The group considered what factors might prompt or promote attitude change. These included money, role change, peer influence pressure, organizational forces, education and demonstrated positive effect. Attitudes are difficult to change. A concerted effort is required and someone needs to be identified as the key person or body involved in the effort.

Ideally, seniors' groups would take up the role of identifying problems with professional approaches, behaviour and attitudes and proposing and monitoring recommended changes in these.

There are numerous seniors' groups that currently exist and have the potential to play an increased role in this respect.

c) Funding

This program sees one major problem continues to be the acquisition of the resources required to mount and maintain educational campaigns. Many organizations are one-time funders, offering "seed funding," but not sustained financial support.

d) Health outcome evaluation measures

Professionals need to be better trained in critical appraisal. They need to endorse and promote ongoing drug utilization review.

H. WORKSHOP CONCLUSIONS

In summarizing and closing the workshop, Dr. David Blair made the following key points.

- There is a leadership role available to each of us. However, in order to exercise that leadership and to successfully fulfill our role, we must each have input. The workshop has provided an opportunity for a diverse group of health care professionals and senior citizens to provide suggestions and input to the Seniors Drug Action Program.

- All of us, as professionals and consumers, are part of the problem. Therefore, we must all be involved in developing and in implementing the solution. The most successful programs will be those based on solid collaboration among several groups.

- A lot of work is still to be done, but based on the ideas and suggestions put forward at this workshop, the potential for development of creative and effective programs is great. The enthusiasm and commitment evident over the past two days suggests we have every chance of success in realizing these programs and in making significant progress towards the goal of rational drug use among our elderly citizens.

Appendix A

PROGRAM POSTERS

A. CONSUMER PROGRAMS

1. Before You Take it -- Talk About it

Sponsor: National Council on Patient Information and Education, Washington, D.C.

Summary: A multi-media campaign designed to encourage older people to communicate about their medicines. Seniors are advised to ask the right questions, to tell health care providers about medicines they are currently taking, to work together with doctors, pharmacists and nurses toward the safe use of prescription and non-prescription drugs.

Target group: Consumers -- the elderly.

Medium: Multi-media, including radio and television ads, print ads for lay and professional publications, brochures, point of purchase counter cards, lapel badges and medication memo.

Resources required: Funds required for purchase of materials (see price list) or production costs if program to be modified. In the United States the broadcast time and print space was obtained free as public service announcements.

Evaluation: The first phase of the evaluation program is designed to measure campaign exposure. Results are not yet available.

2. Medication Information Line for the Elderly (MILE line)

Sponsor: Faculty of Pharmacy, University of Manitoba.

Summary: The provision of drug information by a pharmacist using a telephone information line is one way to increase knowledge about medications. Using radio and television, as well as seniors newspapers and professional newsletters, the MILE line was promoted throughout Manitoba. The program is now three years old and receives about 1,500 calls per year.

Target group: The MILE program serves the needs of consumers of all ages, their care providers and health care professionals, but was directed at the elderly.

Medium: Drug information is provided by telephone with a toll free number available for rural areas. Persons calling after hours can leave a message on a telephone recording service and have their questions answered the next working day.

Resources required: Part-time pharmacists, selected drug references and a telephone are required. The annual cost to the University of Manitoba is $26,000.

Evaluation: Follow-up calls to users of the MILE program indicate that 89% of the recommendations were adhered to. A one-year assessment of the program was completed in 1987 and published in the May, 1987 issue of the Canadian Pharmaceutical Journal.

3. Elder -- Ed: A Model Education Program

Sponsor: U.S. Department of Health, Education and Welfare in cooperation with the American Association of Retired Persons.

Summary: A packet of materials which focuses on some of the problems the elderly confront as drug consumers. Information presented on using medication wisely, how to select and talk to physicians and pharmacists, how to watch out for health fraud (medical remedies that don't work), and general strategies for good health.

Target group: The elderly.

Medium: Print: brochures, booklets, health passport, drug review form. Audio/visual: videos, slide presentation with audiocassette.

Resources required: Costs to purchase materials (e.g., audio/visual material) or cost of producing materials for the Canadian market.

4. The Medicine Your Doctor Prescribes

Sponsor: Pharmaceutical Manufacturers Association of Canada.

Summary: Campaign directed to consumers providing 10 rules for the rational use of prescription drugs. Addresses the problem of lack of knowledge on the part of consumers. Conveys the message "The well informed patient is a responsible patient."

Target group: All adult users of medication.

Medium: Posters and pamphlets.

Resources required: Available in quantity at no charge from P.M.A.C.

Evaluation: Some evaluation undertaken after first year of program (six years ago), but details not available. Program has continued because of ongoing demand for materials.

5. **Medicine Minder Project**

Sponsor: College of Family Physicians of Canada.

Summary: A public education program designed to heighten individual awareness on the safe use of prescription medications. The project addresses noncompliance due to misinformation and provides 10 important tips seniors should follow when taking prescription drugs.

Target group: The elderly.

Medium: Print materials and radio.

Resources required: Costs of distribution.

Evaluation: Evaluation of media exposure undertaken through surveys. Measured willingness of professionals to participate in future projects.

6. **SRx Regional Program Medication Education for Seniors**

Sponsor: Collaboration of Public Health Departments and private foundations (Chevron, USA, Friedman Family Foundation, Richard and Rhoda Goldman Fund, Kaiser Family Foundation, Levi Strauss Foundation, The San Francisco Foundation, van LobenSels Charitable Foundation and Zellerbach Family Fund).

Summary: To ameliorate medication misuse problems among older adults, SRx offers various educational strategies. The emphasis has been on ethnic communities and lower income seniors with little access to medication information. The program however, has not been limited to these areas and includes all segments of the over 60 population.

Target group: The over 60 population.

Medium: Print, lectures, theatre (Medication Fact Sheets, Personal Medication Record, publications "A Guide to Over-the-Counter Medications," brochures, mini classes, Seniors Theatre Education project, advocacy).

Resources required: Costs of ordering material from SRx. See price list.

Evaluation: No information available on this aspect.

7. The Medicine Chest

Sponsor: Timely Innovations Inc.

Summary: The Medicine Chest is a programmable automatic pill dispenser which has a self-contained power source. It will dispense a vial pre-loaded with one or more medications at a specific time. It is programmed like an alarm clock and once loaded, it will automatically dispense one vial up to four times daily for seven days.

Target group: Those who require supervision while taking medication, but who are still able to live independently at home.

Medium: The Chest is a device which is shaped like a hat box, is 16 inches in diameter and weighs about 10 pounds. It has a detachable, light weight loading cartridge for easy transporting. It can be locked.

Resources required: The device can be leased on a short-term basis or purchased outright. The lease cost is $1.95 per day and the Chest sells for about $900.00. The patient will require the weekly assistance of a family member, friend or nurse or re-load the medication supply.

Evaluation: None completed to date.

8. Pharmacy Pill Pak

Sponsor: Manrex Ltd.

Summary: Pill Pak is a packaging aid designed to reduce medication errors, such as missed doses or doses taken at the wrong time. Each Pak consists of 28 bubbles, which provide up to 4 administration times per day for a one-week period. The day and the time are clearly marked and the patient just pushes out the contents of one bubble at the correct time. The Pak is labelled and filled by a pharmacist.

Target group: Patients who self-administer medications at home with a special emphasis on the elderly. It is most useful for the patient on several drugs who has difficulty with vials or is subject to periodic confusion about taking many pills at different times.

Medium: The Pill Pak comes as 6.5 by 10-inch re-usable plastic card which holds a pre-filled 28 bubble blister card. The card is arranged according to the time of the day and the day of the week.

Resources required: The Pill Pak is only available at selected pharmacies and requires special equipment and labelling machines.

Evaluation: Anecdotal reports from Home Care staff are very positive.

9. Brown Bag Program -- Medication Awareness Event

Sponsors: Mayors Office, Toronto, Ontario
Ontario College of Pharmacists
Metro Toronto Pharmacists Association

Summary: This program is a free "drug inspection" service which checks prescription and non-prescription drugs for possible hazards. The participant is given a brown bag and asked to bring all their medications to a review by a pharmacist. The consultation covers storage, safe use, side effects and is done on a private, individual basis.

Target group: Seniors who live at home and take multiple drugs. Most successful with seniors groups, clubs and residential housing.

Medium: The consultation is arranged by phone numbers listed on posters which advertise the program. The sponsors provide brown bags and personalized medication check lists.

Resources required: Pharmacist volunteers, a central phone number and program coordinator are needed. Brown bags and posters need to be printed and private consultation area arranged.

Evaluation: When held as a regular program for seniors (e.g., every second Wednesday), this program has been very successful in Toronto.

10. Elder Care Program Medication Management

Sponsor: Parke-Davis Centre for the Education of the Elderly, Baltimore, Maryland

Summary: A comprehensive program to bring up-to-date and reliable information about medication, nutrition and overall health to elderly persons, formal and informal caregivers.

Target group: Older persons, pharmacists and other health care professionals.

Medium: Brochures, booklets, newsletter, personal medication record, audio-visual materials, visitation program, etc.

Resources required: Variable depending upon comprehensiveness of program.

Evaluation: Not known.

11. Using Symbols to Provide Drug Information

Sponsor: Ezon International Inc.

Summary: EZON has designed a new language using symbols to provide patients with all the necessary drug information at a glance. Symbols can convey indications for use, instructions for use, warnings and precautions and possible adverse effects. The use of symbols will allow patients to distinguish medications visually, follow a dosage routine and identify side effects without reading.

Target group: Persons of all ages with visual impairment, reading difficulty, poor or no English.

Medium: Labels with symbols would be supplied to pharmacies. Pharmacists would apply appropriate labels to the drug container. These same symbols would be included on any written information as visual reinforcement.

Resources required: None to the patient. The pharmacy would incur label costs.

Evaluation: None completed. Many of the symbols needed to provide an evaluation have been designed.

12. Time of Your Life (T.O.Y.L.) Trade Fair

Sponsor: Corporate.

Summary: Trade fair, including displays, demonstrations and information on products and services of interests to older adults. Affords opportunities of dissemination of educational material, messages, etc.

Target group: 10,000 older adults (age 55+), residing in Greater Vancouver and Greater Victoria.

Medium: Seminars, audio-visual, print, etc.

Resources: Cost of producing and disseminating educational material to T.O.Y.L. participants.

Evaluation: Opportunity to evaluate consumer response to program materials through interactive process.

13. Healthy Aging/Caring for the Aging Medication Instruction Module

Sponsor: St. John's Ambulance.

Summary: A series of training modules designed to facilitate healthy aging. Specific modules are available dealing with medication issues, including instructions for the proper handling and consumption of medication and educational information on drug classes, potential side effects and interactions.

Target group: Seniors and their caregivers.

Medium: Training module booklets.

Resources required: Costs of holding training seminars and distribution of materials.

Evaluation: Not known.

14. Elder Care Program Medication Management

Sponsor: Parke-Davis Centre for the Education of the Elderly, Baltimore, Maryland.

Summary: A comprehensive program to bring up-to-date and reliable information about medication, nutrition and overall health to elderly persons, formal and informal caregivers.

Target group: Older persons, pharmacists and other health care professionals.

Medium: Brochures, booklets, newsletters, personal medication record, audio-visual materials, visitation program, etc.

Resources required: Variable depending upon comprehensiveness of program.

Evaluation: Not known.

15. Project Slashes Patient's Average Tablet Tally By 80%

Author: Siddiqui, M.M., **Geriatric Med.** July 1988;57.

Sponsor: None

Summary: A general practitioner with a practice of approximately 220 elderly patients reviewed their medication orders for baseline data and then systematically set out to decrease the number of drugs these patients were receiving. This was done in concert with patient interviews, family conferences and in home visits.

Target group: Patients 65 years and older.

Medium: Physician intervention with educational component.

Resources required: Physician time for visits/education.

Evaluation: Author states that the average number of tablets (prescriptions) decreased from 15 to 3 over a 6-year period. Added benefits included a decrease in assessments for alternate levels of care, increased mobility and socialization.

16. Personal Medication Records

Sponsor: These recording forms have been sponsored by a variety of organizations, including the professional associations, consumer education groups, seniors organizations, the pharmaceutical industry, etc.

Summary: Personal recording forms include health passports, medication records and other records which may be kept by either the patient or the health care professional. These forms are designed to prevent confusion regarding the pharmacological treatment regimen of an older patient. They are not only helpful to the elderly, but assist physicians in the common case where the patient is seeing one or more specialists in addition to their general practitioner.

Target group: Consumers and health care professionals.

Medium: Print, usually in pamphlet or other form which may be easily kept in purse or wallet.

Resources required: Relatively small cost for printing a distribution.

Evaluation: Not known.

17. Drug Compliance Card

Sponsor: Fairfield Health Centre, Geriatric Day Hospital, Victoria.

Summary: The drug compliance card is a medication recording system which is to be updated by the doctor at each visit. The card is kept by the patient and he/she is instructed to present the name of the patient, allergies, medications and dosage, purpose and comment. There is space for 19 medication entries.

Target group: Physicians and elderly patients.

Medium: Print -- card and envelope.

Resources required: Nominal cost for implementation.

Evaluation: No systematic evaluation has been undertaken.

18. Educational Videos

Sponsor: Private or public sector.

Summary: The use of videos for educational purposes has been advocated as a means of reaching and influencing small or large groups of elderly persons or health care professionals at one time. Typically these productions are instructional insofar as they make recommendations on things that either the patient or the clinician may do to avoid problems stemming from the use of medication. Videos may be shown as an inservice education program at a hospital, long-term care facility, etc. or in the case of consumers at a seniors centre or other community outlet. Occasionally, these productions are seen on local or national television and may reach an even wider audience.

Target group: Consumers and health care professionals.

Medium: Video/film.

Resources required: Educational videotapes can either be rented or purchased at a relatively small cost. When production costs must be incurred, the total budget would be considerable.

Evaluation: Typically, little formal evaluation on effects of viewing such educational materials. Value has been described in terms of providing a lot of educational information in a short period of time.

19. The Wise Use of Drugs -- Program for Older People

Sponsor: National Institute on Drug Abuse, U.S.A.

Summary: The film shows how older people can avoid complications stemming from prescription drugs through self-help strategies, information and assistance from professionals (doctors, nurses, pharmacists). It encourages greater awareness among consumers of medication regarding potential problems when drugs are not taken as directed and highlights the responsibility of the consumer.

Target group: The elderly and their caregivers.

Medium: Video.

Resources required: $500 for purchase of video.

Evaluation: No formal evaluation. However, film well received: Winner, Red Ribbon, American Film Festival. Received a very good rating from the Addiction Research Foundation.

20. Consumer Information (Brochures, Pamphlets, etc.)

Sponsor: Private or public sector.

Summary: Brief written information in the form of brochures, booklets, pamphlets, etc., has been widely used to reach elderly persons living in the community. These materials may be distributed through the offices of family physicians, pharmacies, senior centres or they may be mailed to seniors with pension cheques, etc.

Target group: The elderly.

Medium: Print, brochures, pamphlets, booklets, etc. Several examples are shown in the display here.

Resources required: Cost of purchase or production and distribution.

Evaluation: Not known.

21. Drug Caution Program

Sponsor: Manitoba Pharmaceutical Association

Summary: This program was developed to provide education on non-prescription drugs. It encourages the consumer to use the pharmacist to determine if these medications can interact with prescription drugs, existing medical problems or cause side effects.

Target group: Both the pharmacist and the consumer who uses non-prescription drugs. While providing information to the consumer, it complements the use of patient profiles and counselling for the pharmacist.

Medium: A poster that is visible to the consumer is displayed in the pharmacy. Alphabetical labels on the non-prescription medications are matched to drug caution codes on the poster. The codes provide the consumer with information and encourages discussion with the pharmacist. Take home material is also available.

Resources required: The program must be purchased through the Manitoba Pharmaceutical Association.

Evaluation: Now successful in several provinces, this program continues to expand in Western Canada.

B. PROFESSIONAL PROGRAMS

1. Alternate Seniors Analgesic Program (A.S.A.P.)

Proposed sponsor: Seniors Drug Action Program.

Summary: The purpose of this initiative is to fund the service component of a program in which non-pharmacologic and simple analgesic regimens are substituted for narcotic analgesic and NSAIDs. Pain control and adverse effects will be monitored in the intervention and control groups.

Many health-related problems of older patients are associated with persistent and disabling pain. Common treatment strategies for painful conditions include narcotic analgesics and NSAIDs. These drugs have a range of adverse effects from relatively minor symptoms to life threatening effects (e.g., renal impairment, congestive heart failure, gastrointestinal bleeding).

Target group: Intervention will be directed to a group of elderly residents in long term care facilities who are receiving narcotic analgesic and NSAID therapy. Results of the study will be disseminated through articles in professional journals as a means of improving prescribing practices.

Resources required: A detailed budget has not been established. However, funding for a project coordinator, secretary, clinicians, travel and data processing will be required.

2. Geriatric Pharmacy Practice Program

Sponsor: Manitoba Pharmaceutical Association and University of Manitoba.

Summary: This program has three objectives:

a) Increase knowledge needed to work with seniors.
b) Increase knowledge about pharmacological needs of seniors.

c) Improve the pharmacist's ability to work with other health professionals.

The drug therapy of common disorders of the elderly are reviewed by geriatric specialists with the above three objectives in mind.

Target group: Graduate pharmacists, especially in areas of rural practice.

Medium: The course consists of 30 hours of classroom time and one 15-hour assignment. Two classes (two and one-half hours each) are held per month using video tapes and tutorial instructors.

Resources required: The program costs $270.00 for each participant. Videotaped lectures had to be prepared.

Evaluation: The course was first opened in April 1988 and 25 participants enrolled. The first evaluations are being completed now and are favourable.

3. Effect of Initiation, Termination and Reinitiation of Consultant Pharmacist Services in L.T.C.

Author: Cooper J.W. **Medical Care** 1985, 23:84-88

Sponsor: None.

Summary: Study to determine effects of consultant pharmacist services in a LTC facility. Evaluation of effects of the service on number of drugs/patient, admission, discharges, death rate and hospitalizations was done at the time of initiation of services, during a time of withdrawal of services and a 0, 3 months and 3 years post reinstitution of services.

Target group: Long-term care facility residents (72 patients).

Medium: Monthly report of the drug regimen to physicians.

Resources required: Clinical pharmacist. Cost in this study: $3,000 per year (U.S.).

Evaluation: Medication usage decrease by 46% and 42% with consultant pharmacist program.

The decrease was evident in both regularly prescribed and p.r.n. medications. Authors also noted a lower rate of admissions, discharges and deaths during the same time period. A higher rate of hospitalization was noted, but could not be correlated with altered drug therapy. Estimate the net drug savings for the facility to be $32,000 per year with clinical pharmacist reviews in place.

4. Drug Information Reference (D.I.R.)

Sponsor: B.C. Drug and Poison Information Centre.

Summary: The D.I.R. is a series of drug monographs which are produced to assist the user in: choosing drug therapy, assessing drug interactions, proper administration of medications, nursing implications and patient instructions.

Target group: Health Care professionals and caregivers.

Medium: Available in book and computerized formats.

Resources required: Access to computer/systems people for initial setup of computerized version of D.I.R.

Evaluation: Very positively evaluated by current users, especially the conciseness of the monographs, nursing implications and patient instructions sections.

5. Geriatric Therapeutics Companion to Drug Information Reference

Proposed sponsor: Seniors Drug Action Program.

Summary: A practical guide to therapeutic issues in care of the elderly will be prepared. The text will serve as a companion to B.C. Drug Information Reference manual. The text will be structured in the form of approaches to common health problems in the elderly -- e.g., hypertension, arthritis, depression, etc. Each topic will include references to non-phamacologic therapy (where applicable), to special pharmacokinetic and pharmacodynamic considerations in treating older patients and to adverse drug reactions. Cross-reference to the D.I.R. will be made for use, contraindications and precautions, side effects and interactions of specific drugs.

Target group: Physicians, nurses, pharmacists.

Resources required: Funding to support physicians and pharmacists with special expertise in Geriatric Pharmacology and Therapeutics to prepare text.

6. Clinical Pharmacists Prescribing Drug Therapy in Geriatric Setting: Outcome of a Trial

Sponsor: Grant from National Center of Health Services Research.

Summary: Study undertaken to determine effects of two clinical pharmacists (advanced degree) prescribing medications to patients in a skilled nursing home facility. Pharmacists were under the supervision of a physician. Program was evaluated by comparing a control group under the care of a different physician at the same facility. Areas evaluated included pre-trial evaluation of medications in both groups, number of medications per patient, deaths, level of care changes and hospitalizations.

Target group: Skilled nursing home patients.

Medium: Direct intervention through medication prescribing.

Resources required: Advanced degree clinical pharmacists with physical assessment and basic diagnostic skill training. Estimated cost per year at the time of the study was $18,000 (U.S.).

Evaluation: A significant reduction in number of drugs per patient, deaths and an increase in the number of patients discharged to lower levels of care was found in the pharmacist treatment group. A trend towards a decrease in hospitalizations was also reported for this group. Based on the above results, the authors estimated that the net savings from the program would be $70,000 (U.S.) for each 100 patients. Authors note that the study does not show that pharmacists are capable of independent practice, but suggests that team practice may be a desirable approach (see Thompson, J.F., **et al.** **J.A.G.S.**, 1984; 32:154).

7. Computerized "Smart" Card

Sponsor: The Ontario Pharmacists' Association, Green Shield and the Department of Veterans Affairs.

Summary: This cooperative project features the use of a personal identification card which features a computerized microchip that is used to record all medications dispensed by the participating pharmacies. This allows the patient to carry with him/her a complete drug profile at all times without restricting the patient to a specific pharmacy, but allowing the pharmacist to check for drug interactions or duplications prior to dispensing any new medications.

Target group: Pharmacies serving the above patient group initially then extending the concept to the prescribing physician as more experience is gained.

Medium: Personal identification card with implanted computer chip which contains prescription records.

Resources required: Identification cards, card readers/writers. Third party sponsor and participating professional groups.

Evaluation: This project is currently being evaluated in the community of North Bay, Ontario. Sixteen pharmacies are cooperating in the pilot project. The potential benefits are reduction in duplications of prescriptions, less chance of unrecognized drug interactions and improved monitoring of the compliance with prescription regimens.

8. The B.C. Drug and Poison Information Centre (D.P.I.C.)

Sponsor: The B.C. Ministry of Health and the University of B.C. Faculty of Pharmaceutical Sciences.

Summary: D.P.I.C. provides drug information to all health care professionals in B.C. and poison information to the public as well as the health care professions. D.P.I.C. publishes two reference texts (the Drug Information Reference, the Poison Management Manual), in both book format as well as a computerized version. It is also the site of the Pharmacare Drug Usage Review Program (D.U.R.).

Target group: The health care professionals for drug information, the public for poison information.

Medium: Telephone accessible drug and poison information centre.

Resources required: Specially trained physicians, pharmacists and nurses, as well as a comprehensive resource database for drug and poison inquiries.

Evaluation: The programs at D.P.I.C. have been developed to feature the most cost effective regional drug and poison programs available. The extent and nature of this development has been recognized both nationally and internationally.

9. Older Patients and You: Communication With America's Fastest Growing Patient Group

Sponsor: American Association of Retired Persons (AARP).

Summary: A booklet produced for physicians to address the complaint of older patients that doctors don't share sufficient information, don't allow enough time for questions. Tips are provided to assist the physician to perceive what older people are conveying through their verbal and non-verbal messages and to improve his/her own communication skills.

Target group: Physicians.

Medium: Print: booklet.

Resources required: Cost of producing a similar booklet for Canadian physicians plus distribution costs.

Evaluation: Not known.

10. Undergraduate/Post Graduate Medical Education in Geriatric Pharmacology and Therapeutics

Proposed sponsor: Seniors Drug Action Program.

Summary: A workshop of Physicians in Geriatric Medicine and Psychiatry, Pharmacology and Pharmacy and educators could be held to discuss undergraduate and post graduate medication education in Geriatric Pharmacology and Therapeutics in British Columbia.

At present there is no systematic program of undergraduate medical education in Geriatric Pharmacology and Therapeutics. Undergraduate students at UBC attend lectures and seminars in Pharmacology and therapeutic issues are discussed during clinical rotations in Medicine and Surgery. This workshop would address educational needs and program options for medical students in addition to continuing education needs of practicing physicians.

Target group: Workshop of 15-20 physicians, pharmacists, pharmacologists and educators. Ultimate target group: undergraduate medical students and practising physicians.

Resources required: Approximately $5,000 for travel, accommodation, honoraria for participants.

11. Medicating the Geriatric Patient

Summary: Provides a practical introduction for nursing staff to medication use with the elderly. Outlines strategies to detect adverse drug reactions in geriatric patients. Promotes careful assessment of symptoms and complaints which may reveal drug induced problems.

Target group: Nursing staff in hospital and residential care settings.

Medium: Video.

Resources required: Purchase of videotape.

Evaluation: Not known.

12. Manitoba Personal Care Home Prescribing Guide

Sponsor: Manitoba Health Services Commission.

Summary: This prescribing guide is designed to assist physicians in selecting the appropriate drugs for their elderly patients in long term care facilities. The medications are presented by therapeutic class and include current treatment and drug therapy concepts, with special consideration for the elderly, acceptable drugs, dosage, side effects, precautions and relative costs.

Target group: Primary target group is physicians practicing in long term care facilities, but the information will be useful to all physicians, nurses, and pharmacists working with elderly patients at no cost.

Resources required: The development and updating are the responsibility of a professional committee and the costs are absorbed by the sponsor.

Evaluation: There has been no formal evaluation of the guide, but it is reported that physicians and others find the guide useful.

13. Professional Reference Materials

Sponsor: Often sponsored by Government granting agencies, university research centres, etc.

Summary: There is an increasing literature on both research and applied aspects of pharmacology and the effects of medications on functional independence in the elderly. These reference materials, primarily in the form of books and articles, are often not accessed by busy practising health care professionals.

Target group: Physicians, pharmacists, nurses.

Medium: Print -- books, journal articles and other publications.

Resources required: Funds for producing annotated bibliographies, distributing articles to professionals, or other methods of disseminating current scientific information.

Evaluation: Not known.

14. Guidelines for the Use of Behaviour-Modifying Drugs

Sponsor: American Society of Consultant Pharmacists.

Summary: These guidelines include statements concerning problem identification, medication selection and dosing, drug monitoring and the importance of adverse effects. Specific drug regimens are not included, but the guidelines are intended to encourage and promote rational, safe and effective use of behaviour-modifying drugs.

Target group: Pharmacists and other health professionals concerned with assuring the appropriate use of this category of medication. The guidelines are directed to the use of behaviour-modifying drugs in long term care.

Medium: The guidelines are available as a six-page written document.

Resources required: None.

Evaluation: None.

15. Drug Usage Review (D.U.R.) Program

Sponsor: B.C. Pharmacare

Summary: The D.U.R. Program in B.C. measures patterns or trends in prescription drug usage in the province. Target drug groups are screened to determine "exceptional" levels of drug use as determined by the Professional Review Committee. Education programs are then designed to reduce the incidence and degree of this exceptional usage. Each education program is evaluated to determine its effect and the information used to develop the most cost effective program possible.

Target group: The pharmacists and physicians of B.C.

Medium: Not applicable.

Resources required: This program is funded and data provided by Pharmacare. Analysis of data is done by the B.C. Drug and Poison Information Centre (D.P.I.C.). The Professional Review Committee has representatives from both professional Colleges, B.C.MA., The Pharmacist's Society, R.N.A.B.C., Pharmacare and D.P.I.C.

Evaluation: The D.U.R. Program has been consistently shown to decrease the incidence and degree of exceptional drug use in the target drugs studied. The success of the program is due to its structure which ensures confidentiality and cooperation of the professional groups.

16. Nurse Initiated Drug Reduction

Sponsor: Extendicare Hillcrest,
Calgary, Alberta

Summary: Medications were reduced to 2.7 per person through two separate programs initiated by nursing. One program featured twice daily dosing and reduced the frequency of administration of drugs. The other program featured enhanced nursing assessments. Non-drug alternatives were introduced to reduce the use of laxatives and sleeping pills.

Target group: The program was directed at the nursing staff of a long term care facility.

Medium: The results were obtained be developing the assessment skills of the nurse who gives the medications. Nurse-initiated drug orders were avoided by the development of non-medication techniques to manage problems.

Resources required: The programs utilized the services of a staff development coordinator.

Evaluation: The results of the Hillcrest programs have been published in nursing journals and nursing newsletters.

17. Educational Videos

Sponsor: Private or public sector.

Summary: The use of videos for educational purposes has been advocated as a means of reaching and influencing small or large groups of elderly persons or health care professionals at one time. Typically these productions are instructional insofar as they make recommendations on things that either the patient or the clinician may do to avoid problems stemming from the use of medication. Videos may be shown as an inservice education program at a hospital, long-term care facility, etc. or in the case of consumers at a seniors centre or other community outlet. Occasionally, these productions are seen on local or national television and may reach an even wider audience.

Target group: Consumers and health care professionals.

Medium: Video/film.

Resources required: Educational videotapes can either be rented or purchased at a relatively small cost. When production costs must be incurred, the total budget would be considerable.

Evaluation: Typically, little formal evaluation on effects of viewing such educational materials. Value has been described in terms of providing a lot of educational information in a short period of time.

18. Before They Take It -- Talk About It

Sponsor: National Council on Patient Information and Education.

Summary: These print ads placed in professional journals are directed to physicians to increase doctor/patient dialogue on prescription medicine. The ads encourage the physician to provide clear information to patients on their prescriptions even through they might not ask for it. Talking, the ads claim, is the oldest advance in the medicine.

These ads were part of the NCPIE campaign directed to consumers entitled "Before You Take It -- Talk About It."

Target group: Primarily physicians.

Medium: Print -- ads in professional journals.

Resources required: Production and publication costs.

Evaluation: Campaign exposure being measured. Results not yet available.

19. Drug Information Services

Sponsor: Canadian Pharmacy Consultants Inc.

Summary: This independent consulting firm of licensed pharmacists will provide educational material, counselling programs and seminars concerning drug therapy to any interested clients.

Target group: Services can be provided to the public, health professionals and the pharmaceutical industry.

Medium: Personal consultations, written information, conferences or audio-visual presentations are examples of available services.

Resources required: None.

Evaluation: A client list is available which includes examples of firms and organizations which have used the services of Canadian Pharmacy Consultants.

Appendix B

KEYNOTE SPEAKERS' BIOGRAPHIES

Robert M. Bachman, M.A. -- is Executive Director of the National Council on Patient Information and Education in Washington, D.C. and co-author of the report *Priorities and Approaches for Improving Prescription Medicine Use by Older Americans*. He has worked extensively in the area of patient education, serving previously as a senior Manager for the National Institutes of Health.

Ronald Bayne, M.D., F.R.C.P.(C), F.A.C.P. -- is Chairman of the Gerontology Research Council of Ontario and Chairman of the Action Committee of the recently created Coalition of National Organizations with Interest in Medication Use and Elderly Persons. He is also Emeritus Professor of Medicine at McMaster University in Ontario and past President of the Canadian Association on Gerontology.

Madeline Feinberg, Pharm.B.S. -- is a practicing Pharmacist and Director of the Elder Health Program at the University of Maryland School of Pharmacy. She has recently developed a home care pharmacy service to promote compliance and proper medication use among community-based long-term clients.

Michael Gordon, M.D., F.R.C.P. (C) -- is Medical Director at the Baycrest Centre for Geriatric Care in addition to his positions as Head, Division of Geriatrics, Mt. Sinai Hospital and Associate Professor of Medicine, University of Toronto. He sits on the Lowy Commission in Ontario, the mandate of which is to review provincial drug expenditures, manufacturing costs and the prescribing and dispensing of drugs.

Ruby Grymonpre, B.Sc., Pharm.D. -- is Assistant Professor at the Faculty of Pharmacy, University of Manitoba and Clinical Pharmacist in Geriatrics. She was instrumental in developing the Medication Information Line for the Elderly and the Letter of Accomplishment Program in Geriatrics for practicing pharmacists.

Peter Lamy, Ph.D., Sc.D. -- is Professor and director of the Centre for the Study of Pharmacy and Therapeutics for the Elderly in Maryland. He is also Assistant Dean, Geriatrics, School of Pharmacy and Professor of Epidemiology and Preventive Medicine at the University of Maryland. His current work includes a major drug education program for community dwelling elderly persons, funded by the Parke-Davis Foundation.

Morrie Steele, R.N., B.S.N., M.S. -- is a Nursing Practice Consultant with the Registered Nurses Association of British Columbia. He has extensive experience in working with the elderly, through his own previous employment in long term care, mental health and general medical-surgical settings, and as a supervisor of students in geriatric settings.

Appendix C

LIST OF DELEGATES

	Representing
Mr. Apps Council of Senior Citizens 4865 Triumph Street Burnaby, British Columbia V5C 2A1	Council of Senior Citizens
Josephine Arland B.C. Old Age Pensioners #2, 12015 93A Avenue Surrey, British Columbia V3V 6B2	British Columbia Old Age Pensioners
Dr. A.W. Askey Deputy Registrar College of Physicians and Surgeons 1807, 10th Avenue Vancouver, British Columbia V6J 2A9	College of Physicians and Surgeons
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Dr. Douglas Graham Medical Advisor Alcohol and Drug Programs 1019 Wharf Street Victoria, British Columbia V8V 1X4	Alcohol and Drug Program, Ministry of Labour and Consumer Services
Ms. Jan Greenhow Douglas College P.O. Box 2503 New Westminster, B.C. V3L 5B2	Joint Provincial Long Term Care Aid and Homemaker Articulation Committee
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Mr. Karim Harjee Alzheimer Society of British Columbia 101-10900 West 8th Avenue Vancouver, British Columbia V6H 1C4	Alzheimer Society of British Columbia
Ms. Mary Hill B.C. Member NACA 3492 West 36th Avenue Vancouver, British Columbia V6N 2R9	National Advisory Council on Aging
Mr. Ted Hobbs B.C. Parkinsons Disease Association 4325 Georgia Street Burnaby, British Columbia V5C 2T9	British Columbia Parkinsons Disease Association
Ms. Janet Jacobsen BCHA 500-1985 West Broadway Vancouver, B.C. V6J 4Y3	British Columbia Health Association
Mr. Anthony Knills Pharmaceutical Manufacturer Association of Canada #302-1111 Prince of Wales Drive Ottawa, Ontario K2C 3T2	Pharmaceutical Manufacturer Association of Canada
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Ms. Margo Palmer Health Promotion Directorate 425-750 Cambie Street Vancouver, British Columbia V6B 4B5	Health Promotion Directorate Health & Welfare Canada
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Ms. Nora Reaney Director Cedar Cottage Adult Day Care 4065 Victoria Drive Vancouver, British Columbia V5N 4M9	Adult Day Care
Mrs. Barbara Rolls C.A.C. Member 104-1725 Cedar Hill Cross Road Victoria, British Columbia V8P 2P8	Consumers Association of Canada (B.C. Chapter)
Ms. Sue Rothwell President RNABC 2855 Arbutus Street Vancouver, British Columbia V6J 3Y8	Registered Nurses Association of British Columbia

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Registered Psychiatric Nurses Association

Ministry of Health

Ms. Bev Dobbyn, Adult Care Consultant, Preventive Services
Dr. John Gray, Director, Services to the Elderly, Mental Health Services
Dr. Stephen Gray, Medical Consultant, Policy Planning & Legislation
Mr. John Herbert, Executive Director, Pharmacare
Dr. John Higgins, Medical Consultant, Hospital Programs
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Appendix D

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Seniors Drug Action Program Staff and Consultants

Dr. Kim McEwan, Program Coordinator
Mr. Doug Danforth, Pharmacy Consultant
Dr. Duncan Robertson, Medical Consultant

Appendix E

WORKSHOP PLANNING COMMITTEE

The workshop was jointly planned by:

B.C. College of Pharmacists
B.C. College of Physicians and Surgeons
B.C. Drug and Poison Information Centre
B.C. Health Association
B.C. Medical Association
B.C. Ministry of Health
B.C. Pharmacists Society
C4 (Long Term Care, Home Support, Private Care)
Registered Nurses Association of British Columbia
Seniors Resource and Research Society
University of British Columbia

Appendix F

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